

INDUSTRIAL TRAINING REPORT

Shopie- E-Commerce Website

Submitted in partial fulfilment of the requirements

for the award of the degree of

Bachelor of Technology

Computer Science and Engineering

Submitted by:
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CONTENTS

Declaration	3
Certification	4
Acknowledgment	5
Abstract	6
Contents	7-16
List of Figures	17

Chapter 1- Introduction

1. Introduction

1.1 General	20
1.2 Overview of project	21
1.3 Literature Survey	22
1.4 Problem Statement	23
1.5 Scope of Study	24

Chapter 2- System Analysis

2. System Analysis	25
General	25-29
Feasibility Study	30-32
Technical Feasibility	
Economical Feasibility	
Operational Feasibility	
Software and Hardware specifications	33
Data flow Diagram	34

Chapter 3- System Design

3. System Design	35
3.1 Design Methodology	35-36
3.2 User Interface Design	37-40

Chapter 4- Testing

4. Testing	41.
Testing techniques and Strategies	41-42
Debugging and Code improvement	43-45

Chapter 5- Implementation

5. Implementation	46
Web Development Implementation	46-48
Conclusion and Future Scope	49
References	49
Appendix-A	50

DECLARATION

I hereby declare that the work, which is being presented in the training report, entitled “Shopie” in partial fulfilment for the award of Degree of “Bachelor of Technology” in Department of Computer Science & Engineering and submitted to the Department of Computer Science & Engineering, HMR INSTITUTE OF TECHNOLOGY & MANAGEMENT, and NEW DELHI.

I have not submitted the matter presented in this report anywhere for the award of any other Degree.

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CERTIFICATION



No.2022/RST/21-11

Date: - 5th SEP, 2022

TO WHOM SO EVER IT MAY CONCERN

This is to certify that **Ms. Kanishka Malik** student of B.Tech (CSE) of HMR Institute of Technology and Management, Delhi, had done Industrial Training in RSTech Softwares as a Web Developer from 12.07.2022 to 28.08.2022 under the guidance of Mr. Nazeer Kamran, Co-Founder of RSTech Softwares.


(Rahul Prasad)
CEO/Founder
RSTech Softwares

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Acknowledgement

The successful completion of this project mark the beginning of an ever-going learning experience of converting ideas and concepts into real life, practical system. This project was quite a learning experience for me at each and every step. At the same time it has given me confidence to work in professional setup. I feel the experience gained during the project will lead me to gain the bright prospect in the future.

I wholeheartedly say Thank You to RSTech Softwares for giving me this opportunity and letting me built website for your organization. And also I am grateful to my guide Ms. Rashmi mam for giving me this opportunity to showcase my talent.

Therefore, I am grateful to the people who have helped me during this project and made things possible initially. This training ended in very smooth manner. Apart from this I am thankful to all my friends and other people who have supported and helped me during this internship.

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Abstract

In today's fast-changing business environment, it's extremely important to be able to respond to client needs in the most effective and timely manner. If your customers wish to see your business online and have instant access to your products or services.

Electronic commerce, commonly known as e-commerce, is the buying and selling of product or service over electronic systems such as the Internet and other computer networks. Electronic commerce draws on such technologies as electronic funds transfer, supply chain management, Internet marketing, online transaction processing, Electronic Data Interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web at least at one point in the transaction's life-cycle, although it may encompass a wider range of technologies such as e-mail, mobile devices and telephones as well. Electronic commerce is generally considered to be the sales aspect of e-business. It also consists of the exchanging of data to facilitate the financing and payment aspects of business transactions. Even today, some considerable time after the so called 'dot com/Internet revolution', electronic commerce (e-commerce) remains a relatively new, emerging and constantly changing area of business management and information technology. There has been and continues to be much publicity and discussion about e-commerce. Library catalogues and shelves are filled with books and articles on the subject. However, there remains a sense of confusion, suspicion and misunderstanding surrounding the area, which has been exacerbated by the different contexts in which electronic commerce is used, coupled with the myriad related buzzwords and acronyms.

Contents

1. Introduction to Web Development

Web development is the study to develop static and dynamic websites that is helpful to create amazing websites. Web development also includes creation of web applications and web pages as well. It gives access to create applications and websites like face book, amazon etc. You could also learn web coding by researching it on your own, tweaking website templates and inspecting the source code of other websites. A lot of coders learn HTML and CSS this way, using website editing software to tweak a website template and figuring out the code. A lot of people want to learn web coding because they want to create apps like Facebook or find a job in the industry. Since it's super easy to learn web development most of the people should go in this field. No matter whether you're looking for a career or just want to learn coding, learning how to develop the website for you will always help in future and adds plus value in it.. It's one of the smartest decisions you will ever make! Broad term of Web development is actually divided into two parts that is- Front-End and Back-End.

WEB DEVELOPMENT

FRONT-END DEVELOPMENT

BACK-END DEVELOPMENT

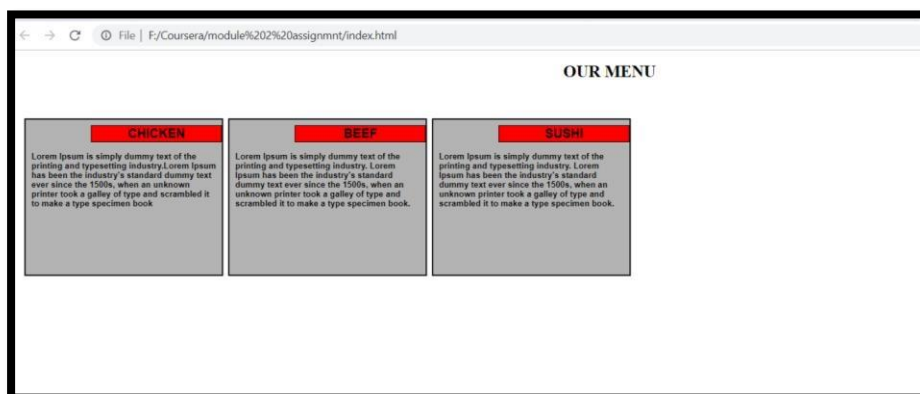


2. Front-End Development

Front-End Web development is the start key to your journey in web development. It includes various languages under it. The most common and initial language is HTML (Hypertext Mark-up language) by this I mean it is a special code for 'marking up' text in order to turn it into a web page. Every web page on the net is written in HTML, and it will form the backbone of any web application. Though initially your web page looks dull but HTML holds very much value to you website. For eg- I made this demo project under coursera and the HTML page of it looks like this-

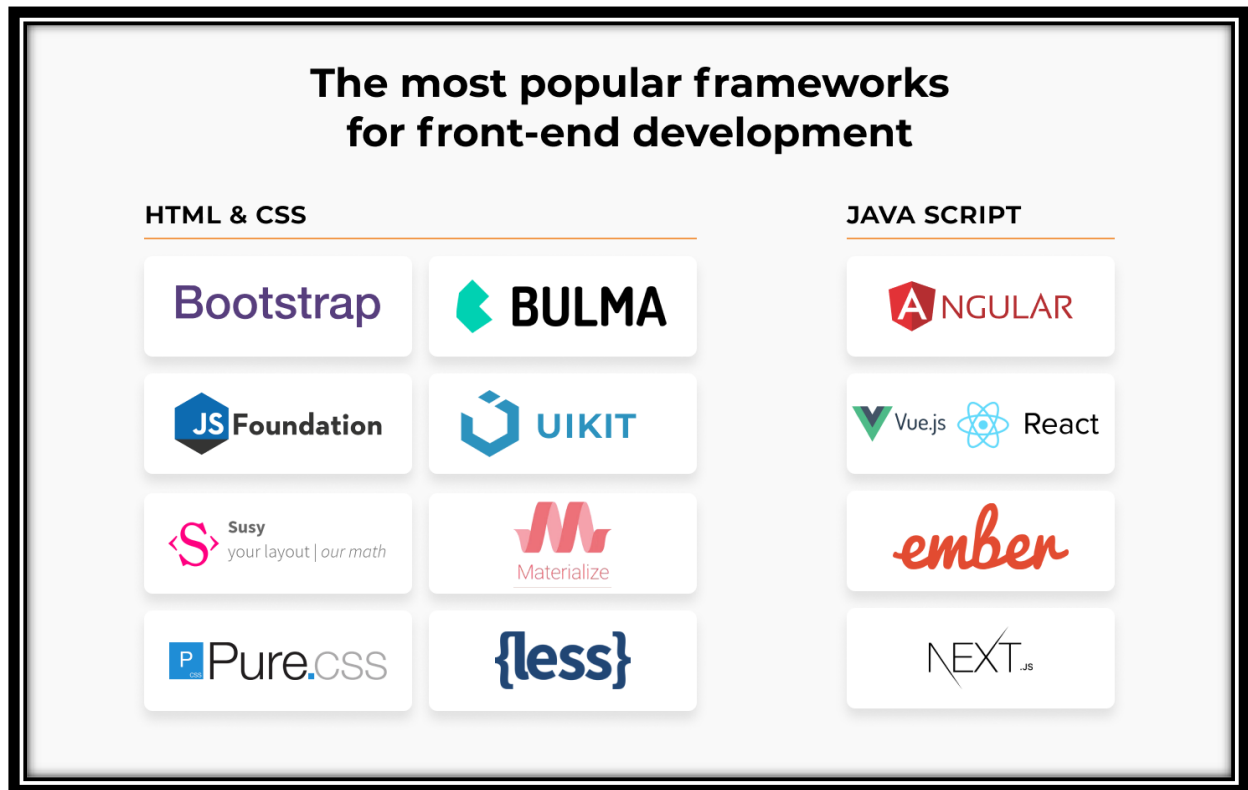


It includes plain and dull page which is the backbone of your website. To make it attractive and user friendly we use another Front-End language that is CSS. CSS(Cascading style sheet) is the code for setting style rules for the appearance of web pages. CSS handles the cosmetic side of the web and makes it more responsive. CSS includes many properties like background colour, font-style etc according to the requirement of the project. For eg- I added CSS properties in the same project I have made as a demo and it will look like this-



Another Front-End development languages and frameworks includes-

- HTML, CSS, and JAVASCRIPT are the main front-end web development languages which is the main backbone of the project.
- Front-end Java script frameworks involves-
 - ✓ **Angular**
 - ✓ **Vue**
 - ✓ **React**
 - ✓ **Ember**

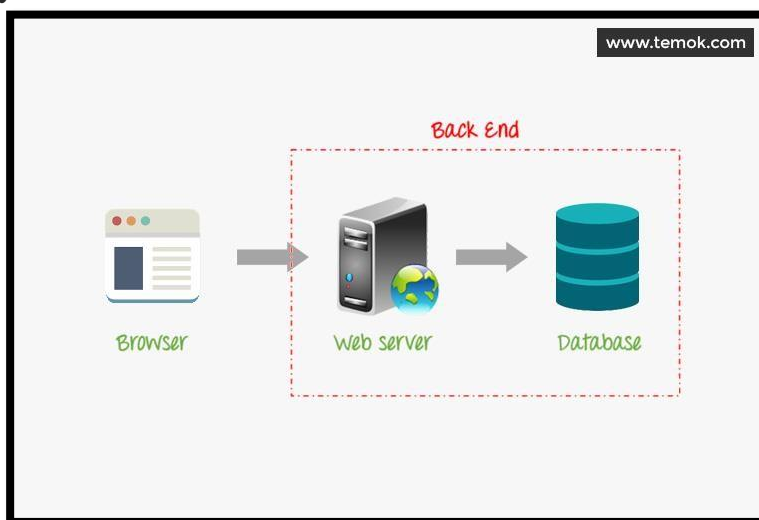


3. Back-End Development

After working on front-end development here comes back-end development. Back-end development refers to the server side of development where you are primarily focused on how the site works. This type of web development usually consists of three parts: a server, an application, and a database. Code written by back end developers is what communicates the database information to the browser. It makes the site dynamic in nature and helps the user to launch their site and use it for projects and even start-ups.

What is a Server?

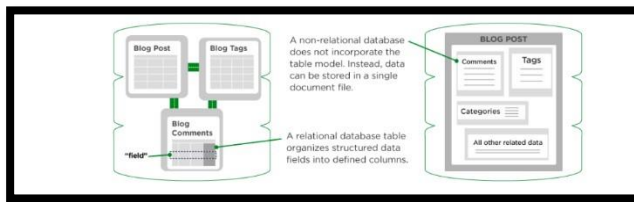
- A server is a computer program or device that provides functionality for other programs or devices, known as “clients”. In web development, the server uses HTTP to serve files to users which render web pages. This happens in response to requests which are forwarded from the HTTP clients of users’ computers: when you type in a URL to your browser’s address bar, you are sending an HTTP request. And it will redirect you to your website.



What is a Database?

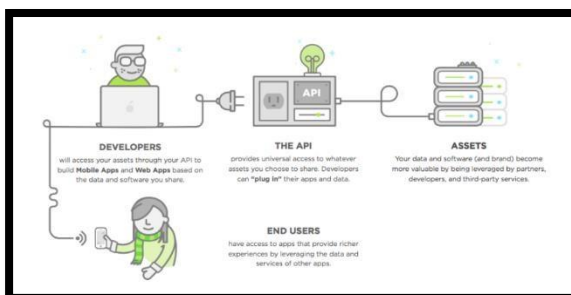
- Databases, in the context of a website, are the brains that make websites dynamic. Any time you request something from a website—whether you’re searching for a product in an online store or searching for hotel locations within a specific state—the database is responsible for accepting that query, fetching the data, and returning it to the website. Databases can also accept new and edited data when users of a website or application interact with them. The client can change information in a database from the browser, whether a user is posting articles to a CMS, uploading photos to a social media profile, or updating their customer

information.



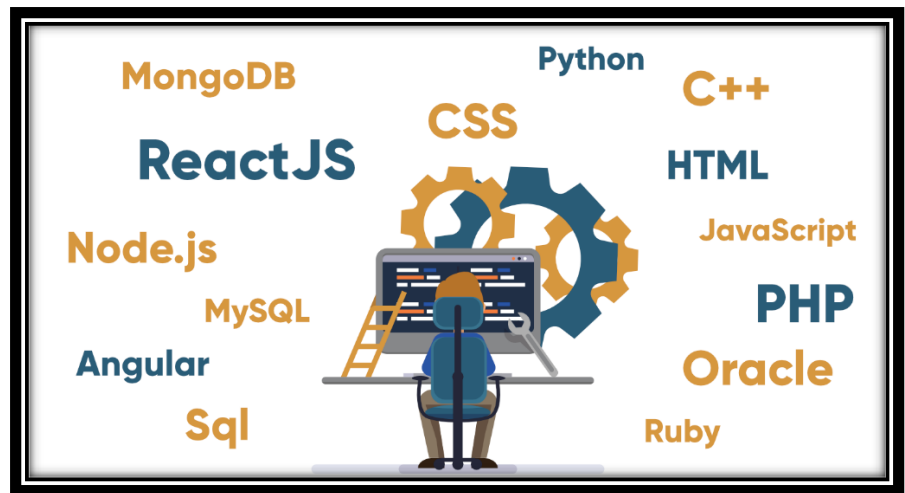
WHAT IS A WEB API?

- An API is a collection of clearly defined methods of communication between different software components.
- More specifically, a *Web API* is the interface created by the back-end: the collection of endpoints and the resources these endpoints expose.
- A Web API is defined by the types of requests that it can handle, which is determined by the routes that it defines, and the types of responses that the clients can expect to receive after hitting those routes.
- One Web API can be used to provide data for different front-ends. Since a Web API can provide data without really specifying how the data is viewed, multiple different HTML pages or mobile applications can be created to view the data from the Web API.



Another Back-end development languages and Frameworks includes-

- My SQL
- Django
- NET
- Spring
- Rails
- Other Java script Frameworks include-
 - ✓ Express.js
 - ✓ Meteor.js
 - ✓ Node.js



4. Web Design

Web design is the process of planning, conceptualizing, and arranging content intended for the Internet. Modern web design goes beyond how things look (aesthetics) to include how things work (functionality). Web design is not limited to websites as it includes other uses such as web apps, mobile apps, and user interface design.

When designing a website, it's imperative to consider both the look and the functionality of the site. Integrating these elements into the design will help maximize the performance of the site, regardless of how performance is measured.

Your site visitors have multiple ways of interacting with your site depending on their device (scrolling, clicking, typing). The best designs always simplify these interactions giving the user the impression they are in complete control.

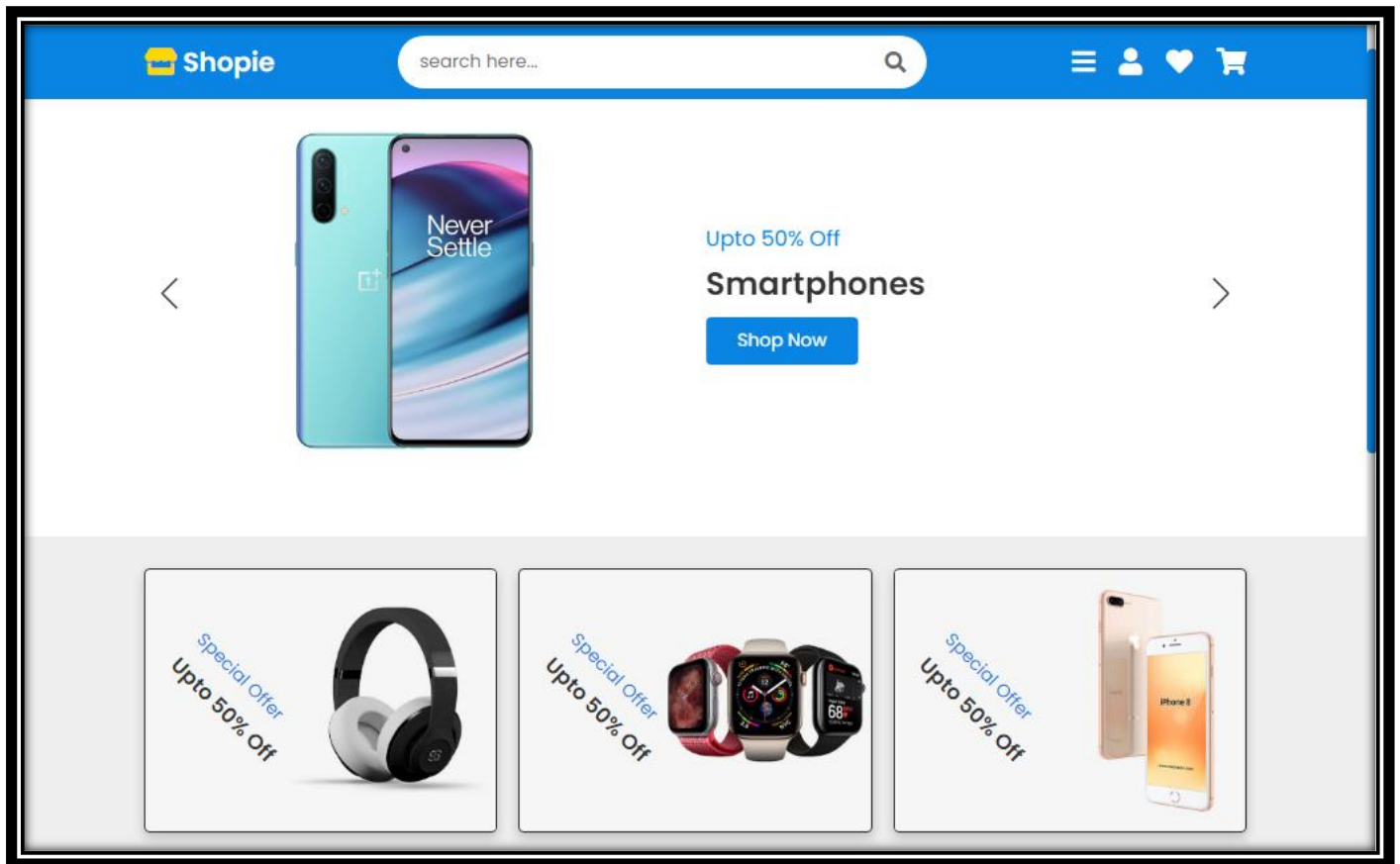
5.Idea of the project

- ✓ Responsive web design (RWD) is a web development approach that creates dynamic changes to the appearance of a website, depending on the screen size and orientation of the device being used to view it. In responsive design, page elements reshuffle as the viewport grows or shrinks.
- ✓ Responsive web design has become more important as the amount of mobile traffic now accounts for more than half of total internet traffic. Therefore, Google announced Mobilegeddon in 2015, and started to boost the ratings of sites that are mobile friendly if the search was made from a mobile device. Responsive web design is an example of user interface plasticity.
- ✓ In today's era, it is very unusual for a business not to have its online presence. With the enhancement in connectivity and the advancement in smartphone technologies, most people now utilize the internet to yield information. Thus, having your business available to cater to these information seekers is key to driving more footfall through your door.
- ✓ Thus this shopie website gives shop owners control over how to portray an image of their business. It also provides its customers with an idea of the products and the ongoing offerings before even physically visiting the shop.

6. Approach

- In this project I have developed a **Multipage E-Commerce Website** and name of the website is Shopie. This website is used to purchase various products like smartphones, watches, headphones, speakers and etc.
- I made this website using initially front-end languages like HTML, CSS, JavaScript.
- Here person can see all the details about what I have done as a front-end developer .
- They can also see all my social media, how to order, payments, order booking and how to contact the company.
- Platform used to do the code is visual studio code (vscode).

Main page of the website:- “SHOPIE”



List of Figures

Fig 2.1:- DFD

Fig 3.1:- Main page of Shopie Website

- Fig 3.1.1:- Home Page
- Fig 3.1.2:- About Page
- Fig 3.1.3:- Products Page
- Fig 3.1.4:- ContactPage
- Fig 3.1.5:- Login Page
- Fig 3.1.6:- Register Page
- Fig 3.1.7:- Cart Page

Fig 4.1:- Code Inspection

Fig 4.2:- Code inspection with toolbar

Fig 5.1:- Main page of website

Fig 5.2:- Responsive Look

Chapter-1 Introduction

1.1 GENERAL

Web development is the process involved in developing a website for various requirements. It is made for the Internet (World Wide Web) or an intranet (a private network). Web development can range from developing a simple single static page of plain HTML text to complex Web-based Internet applications (Web apps), electronic businesses, and social network services. A more comprehensive list of tasks to which Web development commonly refers, may include Web engineering, Web design, Web content development, client-side /server side scripting, Web server and network security configuration, and e-commerce development.

Among Web professionals, "Web development" usually refers to the main non-design aspects of building Web sites: writing mark up and coding. Web development may use content management systems (CMS) to make content changes easier and available with basic technical skills.

For larger organizations and businesses, Web development teams can consist of hundreds of people (Web developers) and follow standard methods like agile methodologies while developing Web sites. Smaller organizations may only require a single permanent or contracting developer, or secondary assignment to related job positions such as a graphic designer, Web designer or information systems technician. Web development may be a collaborative effort between departments rather than the domain of a designated department. There are three kinds of Web developer specialization: front-end developer, back-end developer, and full-stack developer. Front-end developers are responsible for behaviour and visuals that run in the user browser like google chrome, while back-end developers deal with

the servers side and database. Full-stack developer deals in handling both the frontend and back-end side.

1.2 OVERVIEW OF THE PROJECT

HTML and CSS: These two programming languages are the foundational blocks of front-end development. You can't create a web design or launch a webpage without using HTML and CSS. So, it's imperative for web designers to master these two languages.

Javascript: This is another one of the most popular programming languages for front-end development. JavaScript lets you add more features to a website. HTML, CSS, and JavaScript are all you need to create a basic web application. Using these, you can design maps, interactive films, and online games.

jQuery: This is basically a collection of extensions that make developing a website with JavaScript much easier. jQuery is a lightweight library working under the mantra "write less, do more". The ability to wrap multiple lines of JavaScript code into a single line of code makes jQuery a valuable tool for front-end developers.

Bootstrap: Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.

Project: It is a Front-End Web development Shopping website which has pages like-Home page, About page, Products page, Login Page, Register Page, Contact Page and Cart page.

Home page: Home page consist of the title of the website-Shopie and has categories and sub categories section with a zoom hover effect on it. Also, it has a div which has a dummy text for about the Shopie with a picture which has half shadow effect on it and a button with change in color on hover.

It has a responsive home section with touch slider using swiper.js.

It has a subscription section which allows user to subscribe to the website updates.

The header of home page has a navbar with title the Shopie and the other page links in it.

It also consists of a search bar made using vanilla javascript.

The footer section is made using CSS flexbox and contains a small div which states “Created By Kanishka Malik” ,The home page also has vouchers section, order section, new arrivals section and a contact section which has 4 social icons. On hovering these icons, the icons shift to 10px upwards. All main pictures have a linear gradient of blue and the whole website has a white,blue color combination.

About Page: This section contains the story behind the starting up of the “Shopie” website. E-commerce shoppers want to know more about who they're buying from and the only place they're really going to get that information is on just one web page –About Us page. Thus this section comprises of the FAQ / accordion sub-section made using vanilla javascript and further the customer reviews section which has been built using css with touch slider using swiper.js.

Cart Page: The shopping cart section has been made using CSS grid. The cart page has some items listed with pre-added values for all the categories. It has a select category and select quantity option through which a particular category can be selected and its quantity can be changed from 1 to multiple values. It also contains the subtotal and discounted value along with the proceed to checkout button.

Products Page: The products page has certain subsections such as Shop By Category, Featured Products and Deal Of The Day which contain various products like smartphones, watches, camera, televisions, headphones, speakers and etc. The responsive products and category section is made using CSS grid. CSS flexbox has been used in the making of the responsive product banner section.

Contact Page: The Contact page made using CSS grid comprises of the Address, E-mail and contact number of the shopping website along with the facility of Google Maps for knowing the exact location of the store. It further consists of the newsletter section, made using css flexbox wherein the user can subscribe by entering their e-mail id to get the recent updates regarding new tech products.

1.3 LITERATURE SURVEY

Proper designing of website or any project has become a critical element that is required to engage with website and mobile application users. However, little research has been conducted to define the specific elements used in effective website and mobile application design. To make any website or project effective it is important to do some research over that. We attempt to review and consolidate research on effective design and to define a short list of elements frequently used in research. The design elements mentioned most frequently in the reviewed literature were navigation, graphical representation, organization, content utility, purpose, simplicity, Interactivity and readability. We discuss how previous studies define and evaluate these seven elements. This review and the resulting short list of design elements may be used to help designers and researchers to operationalize best practices for facilitating and predicting user engagement. Referring to this project I have used CSS media queries and Flexbox to make the website responsive. Also I use various sources to complete the survey of the project.

1.4 PROBLEM STATEMENT

The development of the website is as efficient as possible for the desktop version. It is properly working on desktop. Currently, there's an issue that the website is not mobile friendly, it is opening on mobile but not that feasible as it is on desktop. So, I would not say it is an issue. In future, I will try to make the site more mobile friendly, it will rather attract more audience to the website to use it on mobiles very conveniently.

The expansion in the website will be time consuming as it will involve redesign of the layout to accommodate the changes in the website.

1.5 SCOPE OF STUDY

The scopes of the industrial training include but not limited to:

- System development according to the students' program specialization; in group or individually. The students should be involved in any of these phases: system analysis, system design, system coding, system validation and verification, system documentation and system maintenance;
- Experience in various line of work through guided tasks such as data collection, experiment sampling, computer hardware installation, maintenance and repair, system design and development, resource management and etc.;
- Exposure in management and administration aspects including acquiring overall understanding about processes and operations of a system;
- Involvement in positive activities within the organization.

CHAPTER-2 SYSTEM ANALYSIS

2.1 GENERAL

HTML5

HTML5 is a markup language used for structuring and presenting content of the website on the World Wide Web. It is the fifth and latest major version of HTML that is a World Wide Web Consortium (W3C) recommendation. The current specification is known as the HTML Living Standard and is maintained by a consortium of the major browser vendors (Apple, Google, Mozilla, and Microsoft), the Web Hypertext Application Technology Working Group (WHATWG).

HTML5 was first released in public-facing form on 22 January 2008, with a major update and "W3C Recommendation" status in October 2014. Its goals were to improve the language with support for the latest multimedia and other new features; to keep the language both easily readable by humans and consistently understood by computers and devices such as web browsers, parsers, etc., without XHTML's rigidity; and to remain backward-compatible with older software. HTML5 is intended to subsume not only HTML 4 but also XHTML 1 and DOM Level 2 HTML.

HTML 5 introduces elements and attributes that reflect typical usage on modern websites. Some of them are semantic replacements for common uses of generic block `<div>` and inline `` elements, for example `<nav>` (website navigation block), `<footer>` (usually referring to bottom of web page or to last lines of HTML code), or `<audio>` and `<video>` instead of `<object>`. Some deprecated elements from HTML 4.01 have been dropped, including purely presentational elements such as `` and `<center>`, whose effects have long been superseded by the more capable Cascading Style Sheets.

CSS3

CSS stands for Cascading Style Sheets which helps to make websites or webpages look more interactive and look attractive. CSS is a standard style sheet language used for describing the presentation (i.e. the layout and formatting) of the web pages. Prior to CSS, nearly all of the presentational attributes of HTML documents were contained within the HTML mark up (specifically inside the HTML tags); all the font colours, background styles, element alignments, borders, Images and sizes had to be explicitly described within the HTML.

As a result, development of the large websites became a long and expensive process, since the style information was repeatedly added to every single page of the website.

To solve this problem CSS was introduced in 1996 by the World Wide Web Consortium (W3C), which also maintains its standard. CSS was designed to enable the separation of presentation and content. Now web designers can move the formatting information of the web pages to a separate style sheet which results in considerably simpler HTML mark up, and better maintainability of CSS and HTML code in separate folders.

CSS3 is the latest version of the CSS specification. CSS3 adds several new styling features and improvements to enhance the web presentation capabilities.

JAVASCRIPT

JavaScript (js) is a light-weight object-oriented programming language which is used by several websites for scripting the web pages. It is an interpreted, full-fledged programming language that enables dynamic interactivity on websites when applied to an HTML document. It is also helpful in making sites more responsive and by providing some animations as well. It was introduced in the year 1995 for adding programs to the web pages in the Netscape Navigator browser. Since then, it has been adopted by all other graphical web browsers. With JavaScript, users can build modern web applications to interact directly without reloading the page every time. The traditional website uses js to provide several forms of interactivity and simplicity.

Although, JavaScript has no connectivity with Java programming language. The name was suggested and provided in the times when Java was gaining popularity in the market. In addition to web browsers, databases such as CouchDB and MongoDB use JavaScript as their scripting and query language.

JavaScript is used to create interactive websites. It is mainly used for:

- Client-side validation,
- Dynamic drop-down menus,
- Displaying date and time,
- Animations
- Displaying pop-up windows and dialog boxes (like an alert dialog box, confirm dialog box and prompt dialog box),
- Displaying clocks , calculators etc.

BOOTSTRAP

Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS and (optionally) Java script-based design templates for typography, forms, buttons, navigation, and other interface components.

Bootstrap, originally named Twitter Blueprint, was developed by Mark Otto and Jacob Thornton at Twitter as a framework to encourage consistency across internal tools. Before Bootstrap, various libraries were used for interface development, which led to inconsistencies and a high maintenance burden. According to Twitter developer Mark Otto:

A super small group of developers and I got together to design and build a new internal tool and saw an opportunity to do something more. Through that process, we saw ourselves build something much more substantial than another internal tool. Months later, we ended up with an early version of Bootstrap as a way to document and share common design patterns and assets within the company.

After a few months of development by a small group, many developers at Twitter began to contribute to the project as a part of Hack Week, a hackathon-style week for the Twitter development team. It was renamed from Twitter Blueprint to Bootstrap, and released as an open source project on August 19, 2011.

jQUERY

What is jQuery?

jQuery is a lightweight, "write less, do more", JavaScript library.

The purpose of jQuery is to make it much easier to use JavaScript on your website.

jQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code.

jQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation.

The jQuery library contains the following features:

- HTML/DOM manipulation
- CSS manipulation
- HTML event methods
- Effects and animations
- AJAX
- Utilities

Why jQuery?

- There are lots of other JavaScript libraries out there, but jQuery is probably the most popular, and also the most extendable.
- Many of the biggest companies on the Web use jQuery, such as:
- Google
- Microsoft
- IBM
- Netflix

The jQuery syntax is tailor-made for selecting HTML elements and performing some action on the element(s).

Basic syntax is: `$(selector).action()`

- A \$ sign to define/access jQuery
- A *(selector)* to "query (or find)" HTML elements
- A jQuery *action()* to be performed on the element(s)

2.3 FEASIBILITY STUDY

A feasibility study is conducted to find out whether the proposed system is possible, affordable, maintainable and acceptable for an organization. The financial, political, social and time constraints must be considered during this study. It is important to be reasonably sure of the success of proposed system before initiating work on it. A feasibility study is a study to find out whether the proposed system is:

- **Possible**—to build it with the given technology and resources.
- **Affordable**—Within given the time and cost constraints of the organization
- **Acceptable** —for use by the eventual users of the system.
- **Maintainable**- by the users of the organization with minimum cost.

2.3.1 TECHNICAL FEASIBILITY

Technical feasibility helps in understanding the level and kind of technology needed for a system. It includes performance issues and constraints that may affect the ability to achieve an acceptable system. It helps the user to tell about how efficient his system is.

Technical feasibility entails an understanding of the following:

- Different technologies involved in the proposed system such as hardware platform and software environment to implement the project.
- Existing technology levels within the organization
- The level of expertise required to use the suggested technology. It may determine the need for user training and therefore affect the costs of the system.

2.3.2 ECONOMICAL FEASIBILITY

Economic Feasibility determines the costs of developing and implementing a new system as well as the benefits of the new system. The study of costs and benefits is also known as **Cost Benefit analysis**. A system is said to be **economically feasible** if benefits are more than costs. If it is providing more benefits to users than its cost then it is economical feasible. It includes tangible and intangible benefits. Tangible benefit is the benefit that can be measured in money value. It results increased revenue and decreased cost. Intangible benefit is difficult to quantify but its effect is realized as follows:

- Better market position and values in comparison to the other competitors.
- Improved service to customers due to correct information on time.
- Improved and polished service to customers results in better growth will resulting in more business.

2.3.3 OPERATIONAL FEASIBILITY

Operational feasibility is dependent on human resources available for the project and involves projecting Whether the system will be used conveniently if it is developed and implemented.

Operational feasibility is a measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of system development.

Operational feasibility reviews the willingness of the organization to support the proposed system. This is probably the most difficult of the feasibilities to gauge. In

order to determine this feasibility, it is important to understand the management commitment to the proposed project. If the request was initiated by management, it is likely that there is management support and the system will be accepted and used. However, it is also important that the employee base will be accepting of the change.

2.4 SOFTWARE AND HARDWARE SPECIFICATIONS

HARDWARE REQUIREMENTS

- Intel i3 or i5 (1.98 GHz recommended)
- 4GB RAM
- 1GB free HDD space

SOFTWARE REQUIREMENTS

- Visual Studio Editor
- Git hub/Postman
- MS Word
- Web Browser(Google Chrome/ Microsoft Edge)
- Operating System (Windows 7/ Windows 10)

2.5 DATA FLOW DIAGRAM

Model View Controller or MVC as it is popularly called, is a software design pattern for developing web applications. A Model View Controller pattern is made up of the following three parts:

- **Model** - The lowest level of the pattern which is responsible for maintaining data.
 - **View** - This is responsible for displaying all or a portion of the data to the user.
 - **Controller** - Software Code that controls the interactions between the Model and View.
- MVC is popular as it isolates the application logic from the user interface layer and Supports separation of concerns.

Here the Controller receives all requests for the application and then works with the Model to prepare any data needed by the View.

The View then uses the data prepared by the Controller to generate a final presentable response.

The MVC abstraction can be graphically represented as follows.

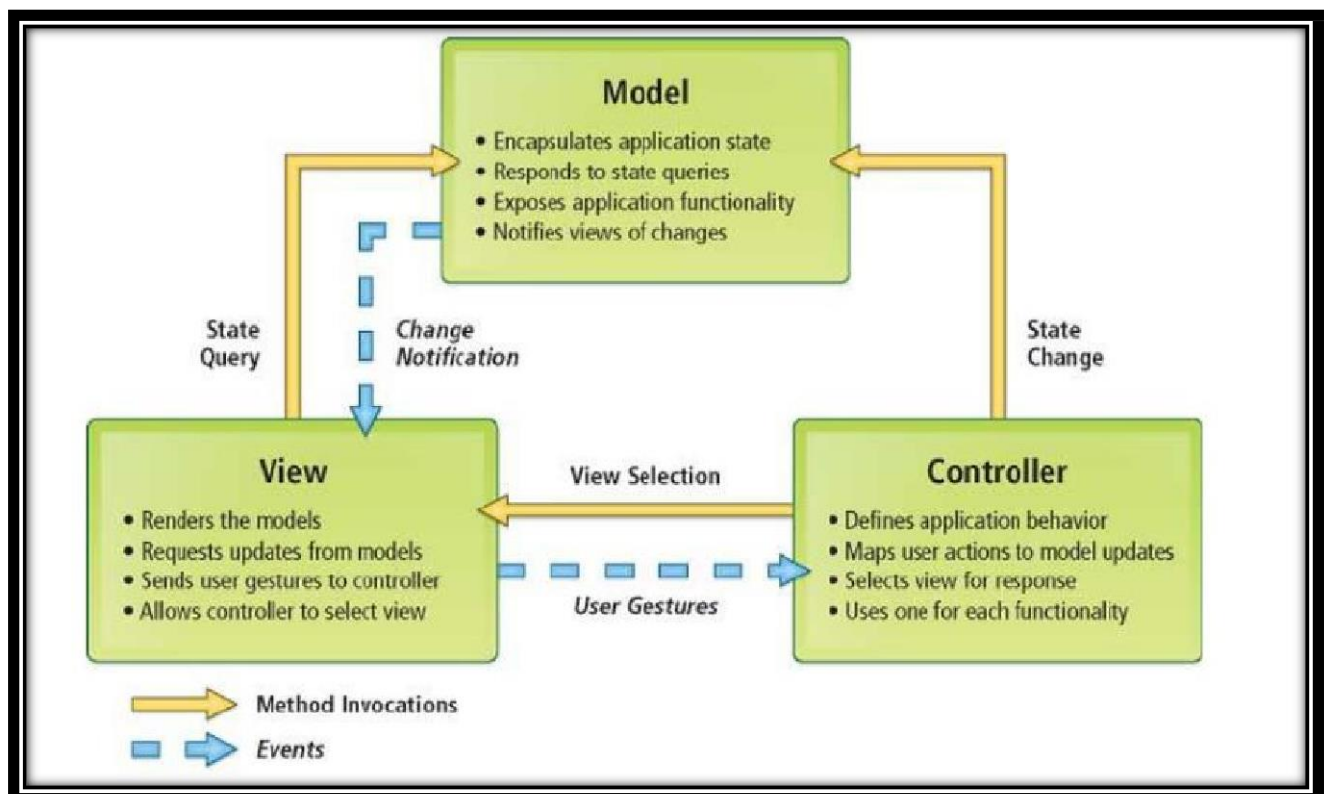


Fig:- 2.1

2.6 RULES TO CONSTRUCT A DATA FLOW DIAGRAM

- Arrows should not cross each other.
- Squares, circles and files must wear names.
- Decomposed data flows must be balanced.
- No two data flows, squares or circles can be the same names.
- Draw all data flows around the outside of the diagram.
- Choose meaningful names for data flows, processes & data stores.
- Control information such as record units, password and validation requirements are not pertinent to a data flow diagram.

Additionally, a DFD can be utilized to visualize data processing or a structured design.

This basic DFD can be then disintegrated to a lower level diagram demonstrating smaller steps exhibiting details of the system that is being modeled. On a DFD, data items flow from an external data source or an internal data store to an internal data store or an external data sink, via an internal process. It is common practice to draw a context-level data flow diagram first, which shows the interaction between the system and external agents, which act as data sources and data sinks.

On the context diagram (also known as the Level 0 DFD'), the system's interactions with the outside world are modeled purely in terms of data flows across the system boundary. The context diagram shows the entire system as a single process, and gives no clues as to its internal organization.

This context-level DFD is next "exploded", to produce a Level 1 DFD that shows some of the detail of the system being modeled. The Level 1 DFD shows how the system is divided into sub-systems (processes), each of which deals with one or more of the data flows to or from an

external agent, and which together provide all of the functionality of the system as a whole. The level 1 DFD is further spreaded and split into more descriptive and detailed description about the project as level 2 DFD. The level 2 DFD can be a number of data flows which will finally show the entire description of the software project.

CHAPTER-3 SYSTEM DESIGN

3.1 DESIGN METHODOLOGY

Design methodology refers to the development of a system or method for a unique situation. Today, the term is most often applied to technological fields in reference to web design, Graphics, software or information systems design. Various degree programs involve design methodology, including those in the graphic and digital arts.

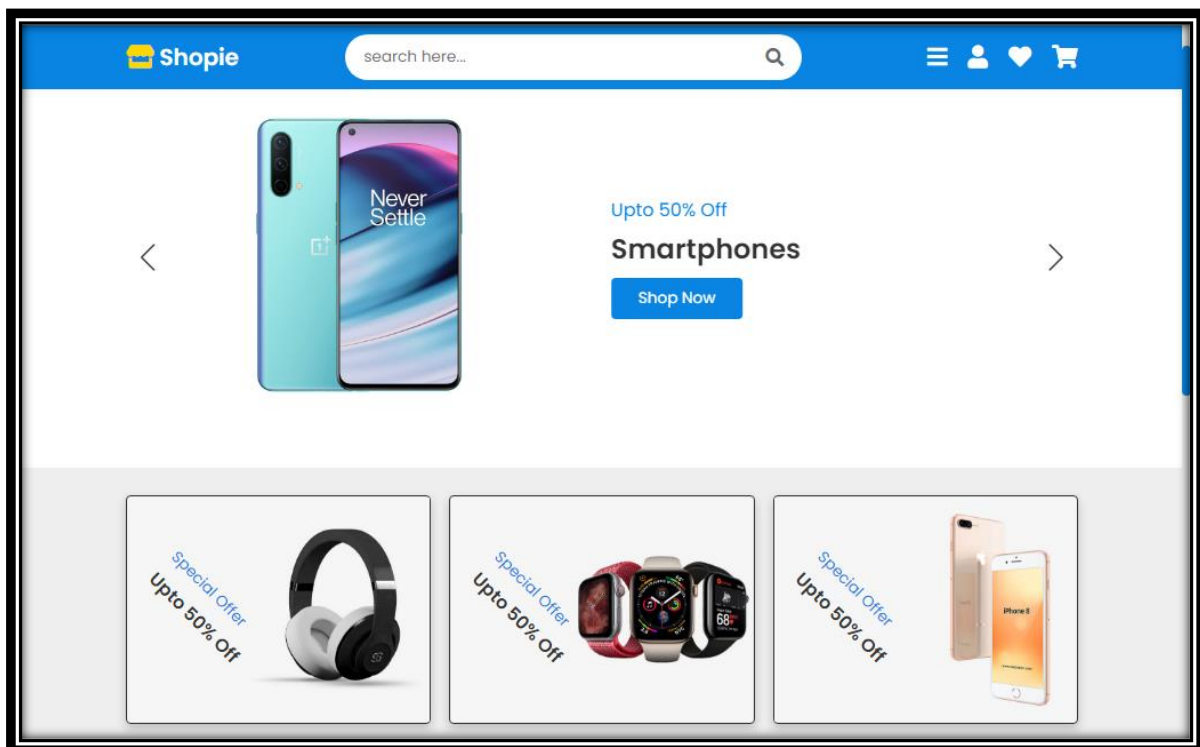


Fig:-3.1 Main page of Shopie Website

In fig: 3.1, we can see the user friendly outlook of the website. On left side you can see the sliders according to the requirement you can check. On the top navbar you can see other options to use and explore the necessary features. These are made using CSS properties and using API's.

FUNCTIONALITY & SNAPSHOTS

3.1.1 Features Of Website

- The main features of this website are:
 - responsive header section with search bar using vanilla javascript.
 - responsive side-bar menu section using vanilla javascript.
 - responsive home section with touch slider using swiper.js.
 - responsive banner section css grid.
 - responsive arrivals section css grid.
 - responsive about section css flexbox.
 - responsive reviews section css with touch slider using swiper.js.
 - responsive category section css grid.
 - responsive products section css grid.
 - responsive product banner section css flexbox.
 - responsive contact info section css grid.
 - responsive contact section css flexbox.
 - responsive newsletter section css flexbox
 - responsive login and register section.
 - responsive shopping cart section css grid.
 - responsive footer section css flexbox.

3.1.2 Working of Project

Home page: Home page consist of the title of the website-Shopie and has categories and sub categories section with a zoom hover effect on it. Also, it has a div which has a dummy text for about the Shopie with a picture which has half shadow effect on it and a button with change in color on hover.

It has a responsive home section with touch slider using swiper.js.

It has a subscription section which allows user to subscribe to the website updates.

The **header** of home page has a navbar with title the Shopie and the other page links in it.

It also consists of a search bar made using vanilla javascript.

The **footer** section is made using CSS flexbox and contains a small div which states “Created By Kanishka Malik”, The home page also has vouchers section, order section, new arrivals section and a contact section which has 4 social icons. On hovering these icons, the icons shift to 10px upwards. All main pictures have a linear gradient of blue and the whole website has a white,blue color combination.

About Page: This section contains the story behind the starting up of the “Shopie” website. E-commerce shoppers want to know more about who they're buying from and the only place they're really going to get that information is on just one web page –About Us page. Thus this section comprises of the FAQ / accordion sub-section made using vanilla javascript and further the customer reviews section which has been built using css with touch slider using swiper.js.

Cart Page: The shopping cart section has been made using CSS grid. The cart page has some items listed with pre-added values for all the categories. It has a select category and

select quantity option through which a particular category can be selected and its quantity can

be changed from 1 to multiple values. It also contains the subtotal and discounted value along

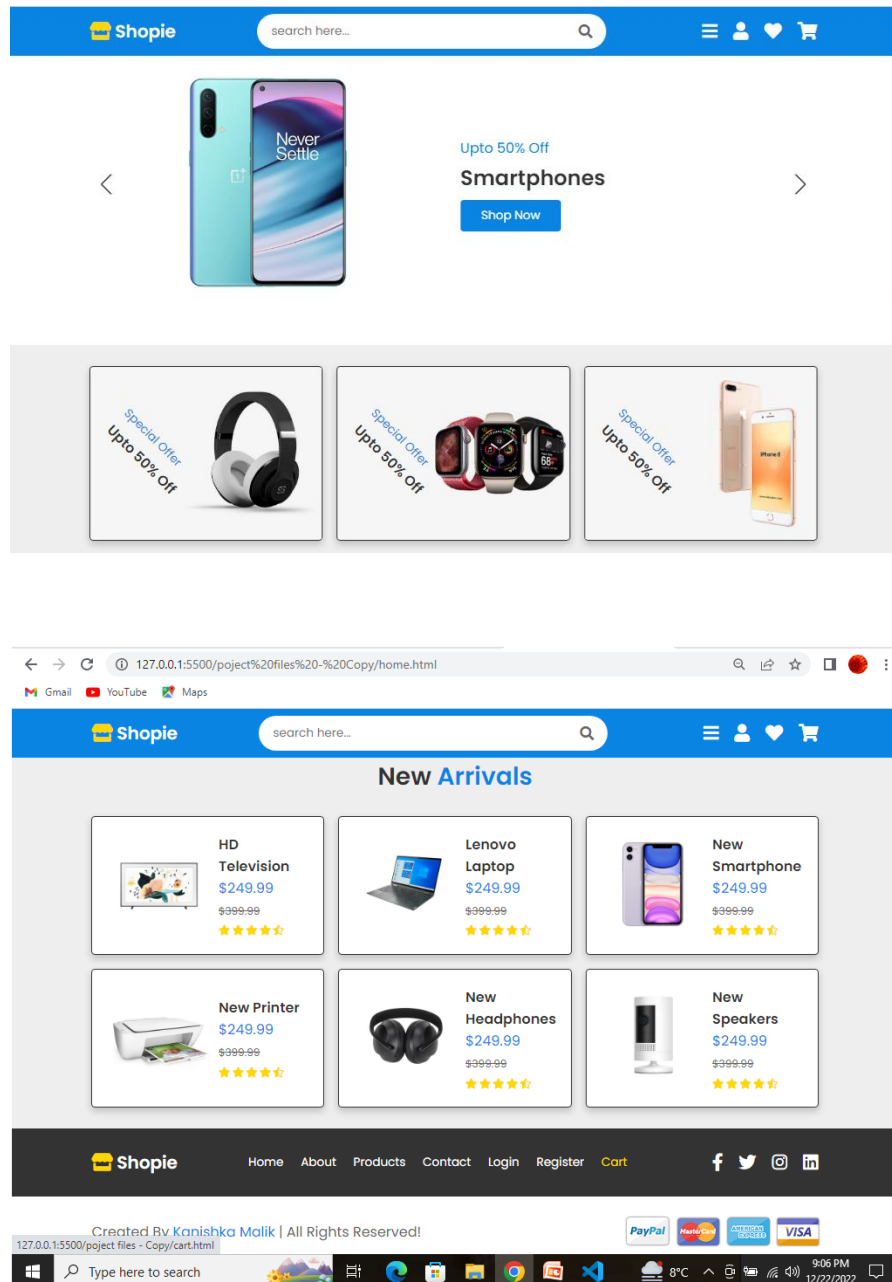
with the proceed to checkout button.

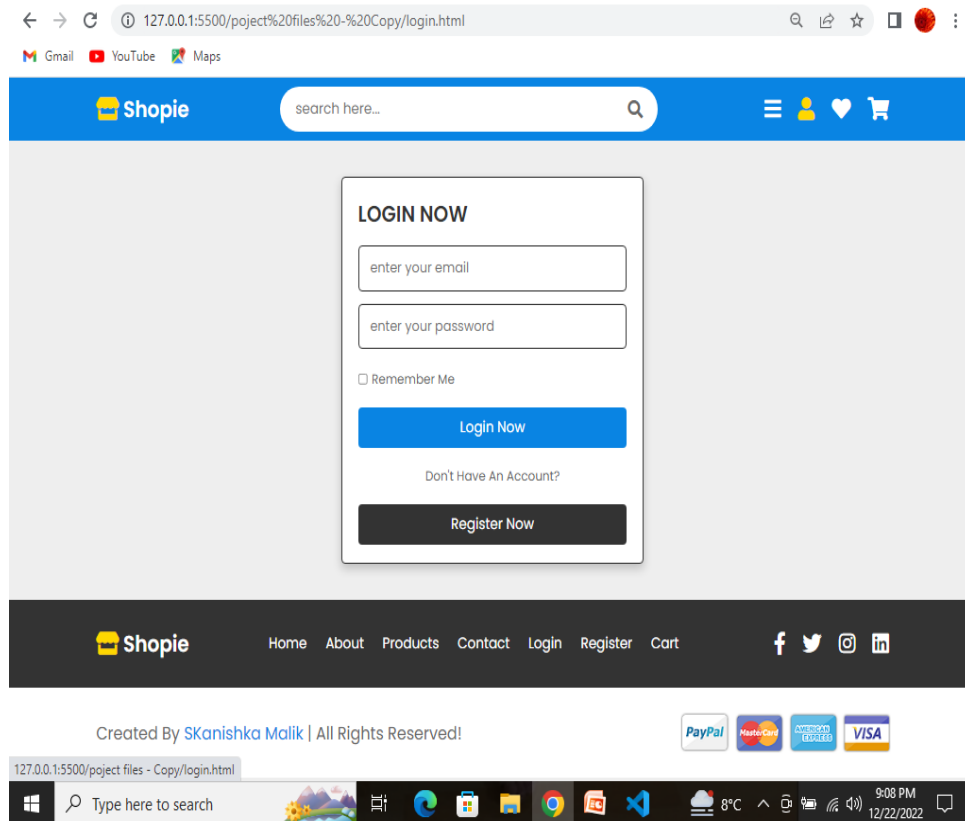
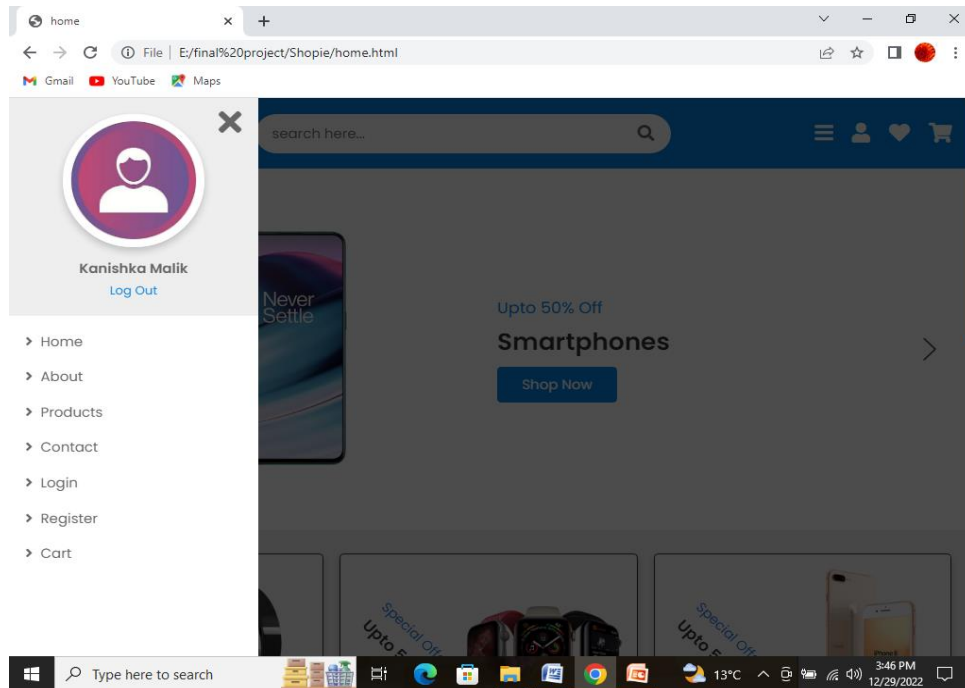
Products Page: The products page has certain subsections such as Shop By Category, Featured Products and Deal Of The Day which contain various products like smartphones, watches, camera, televisions, headphones, speakers and etc. The responsive products and category section is made using CSS grid. CSS flexbox has been used in the making of the responsive product banner section.

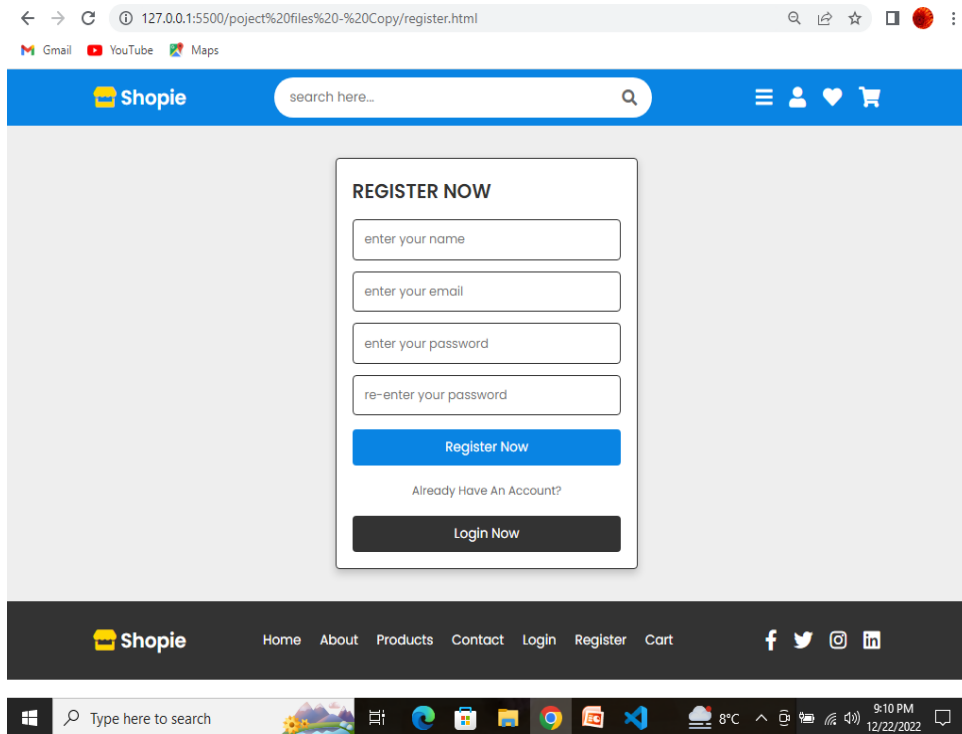
Contact Page: The Contact page made using CSS grid comprises of the Address, E-mail and contact number of the shopping website along with the facility of Google Maps for knowing the exact location of the store. It further consists of the newsletter section, made using CSS flexbox wherein the user can subscribe by entering their e-mail id to get the recent updates regarding new tech products.

SNAPSHOTS OF PROJECT

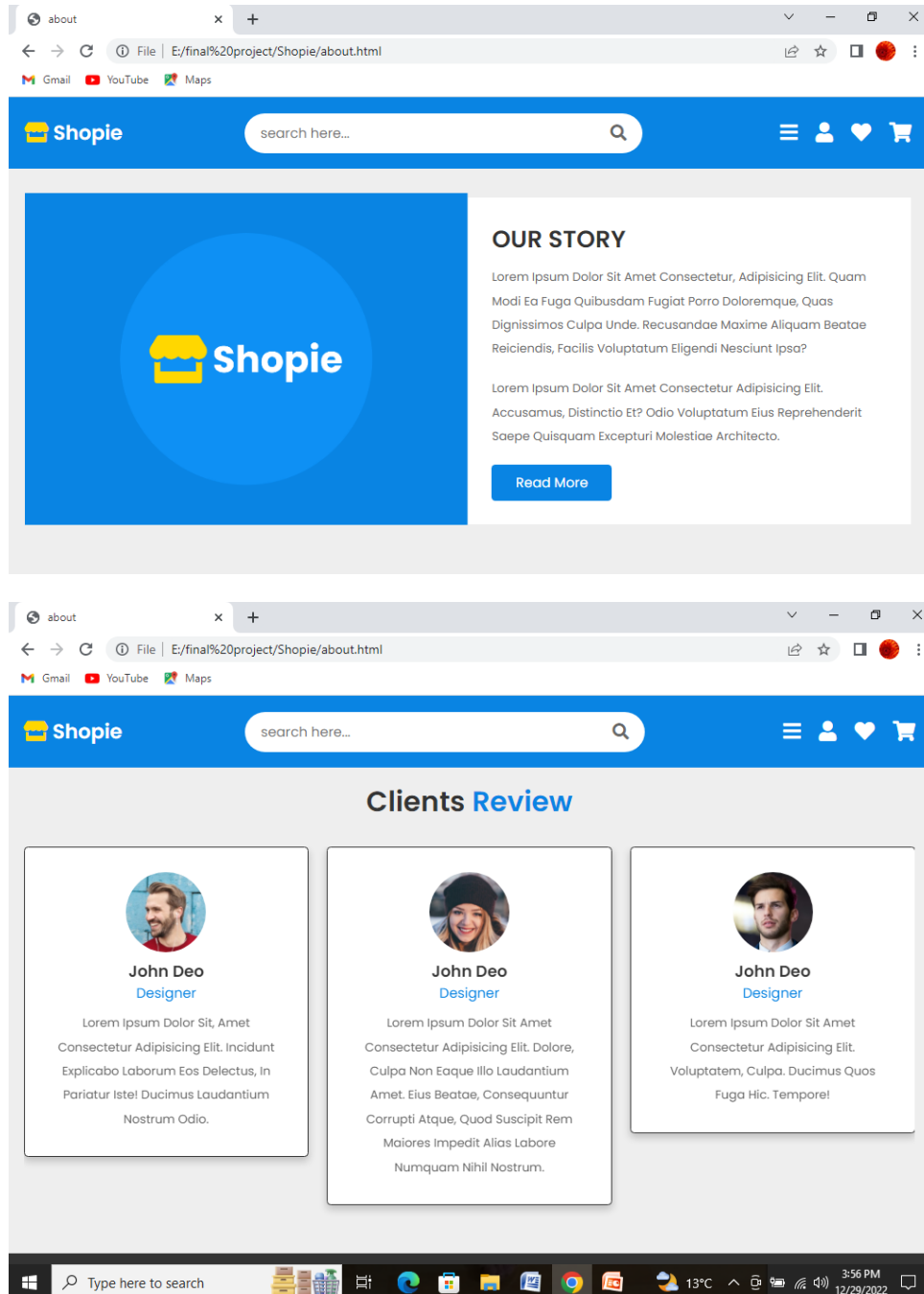
HOME PAGE



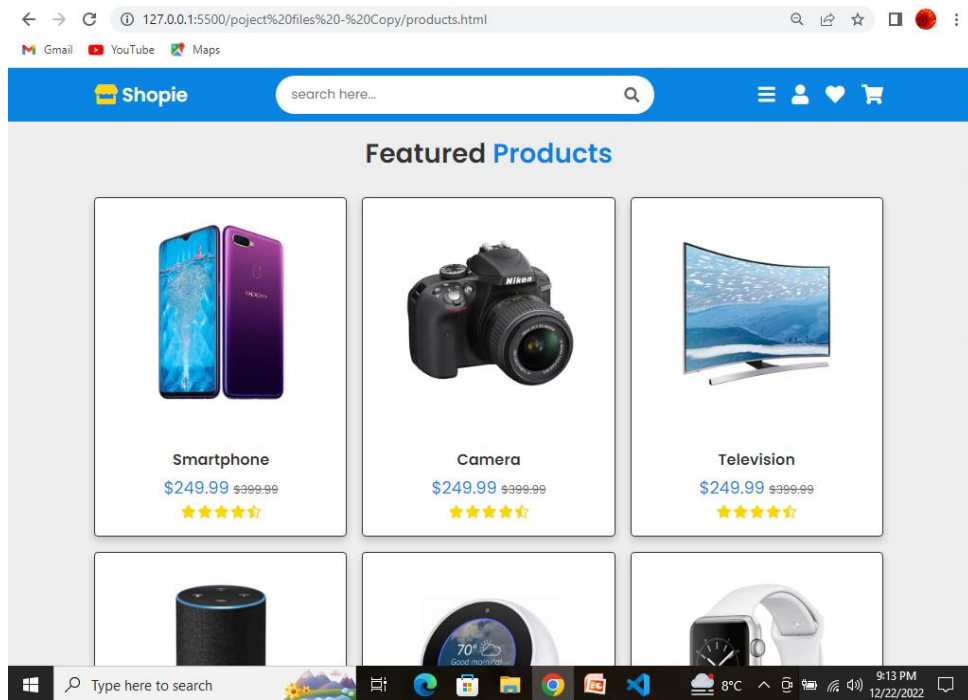
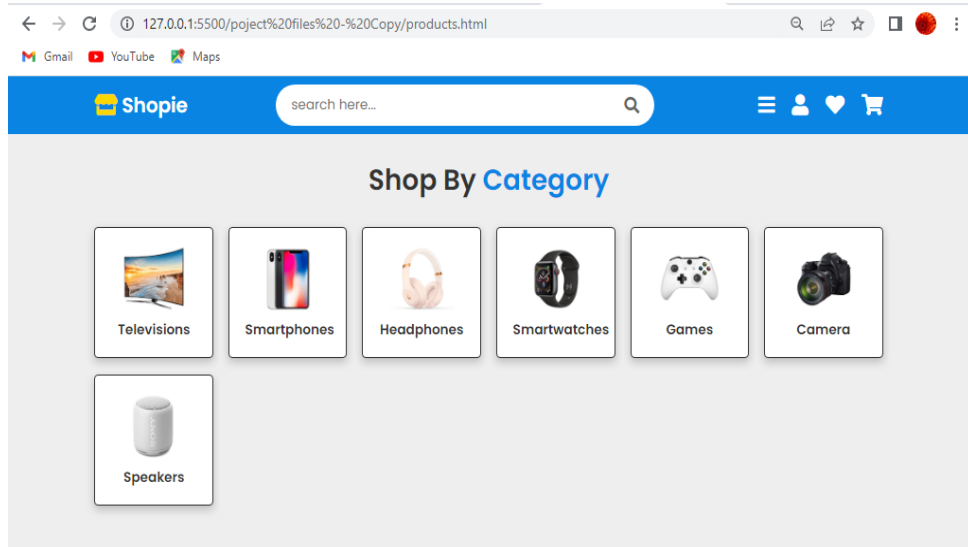


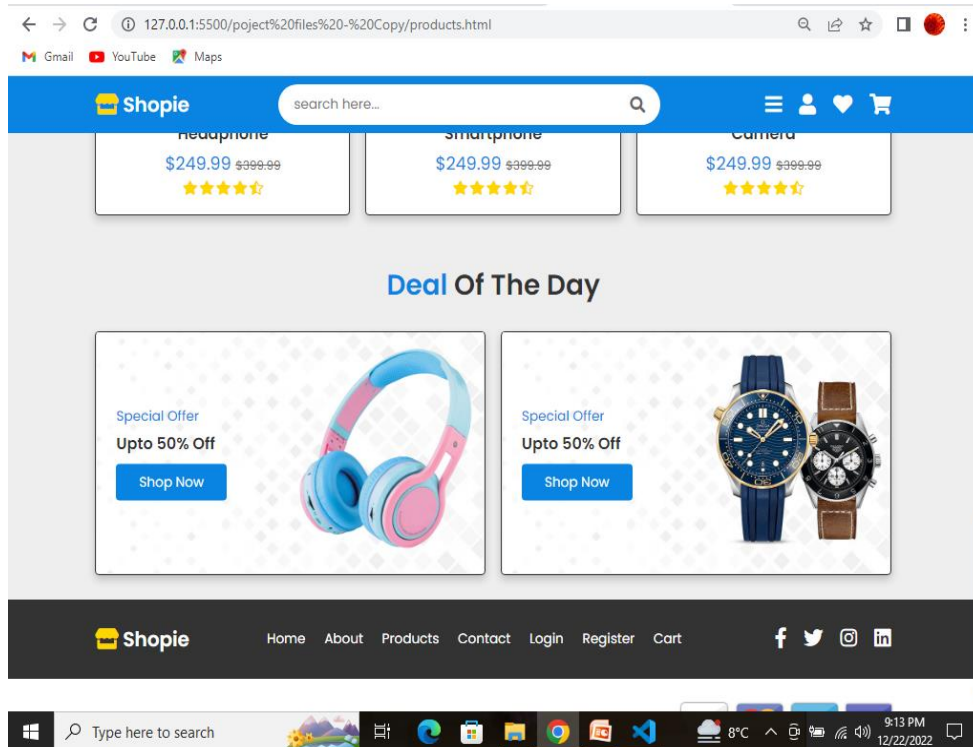


ABOUT PAGE

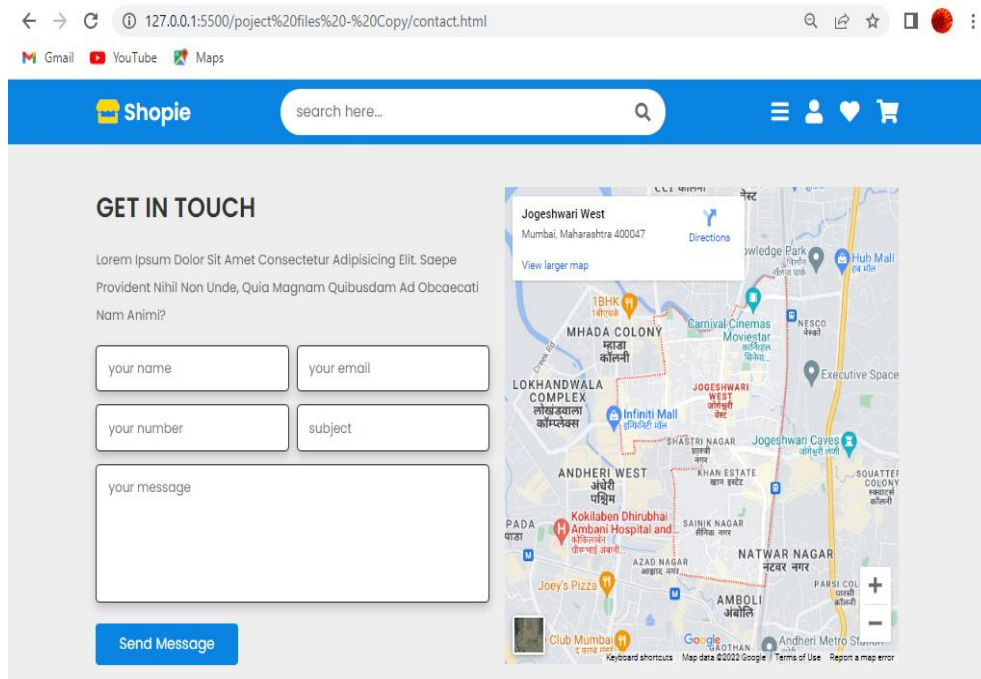
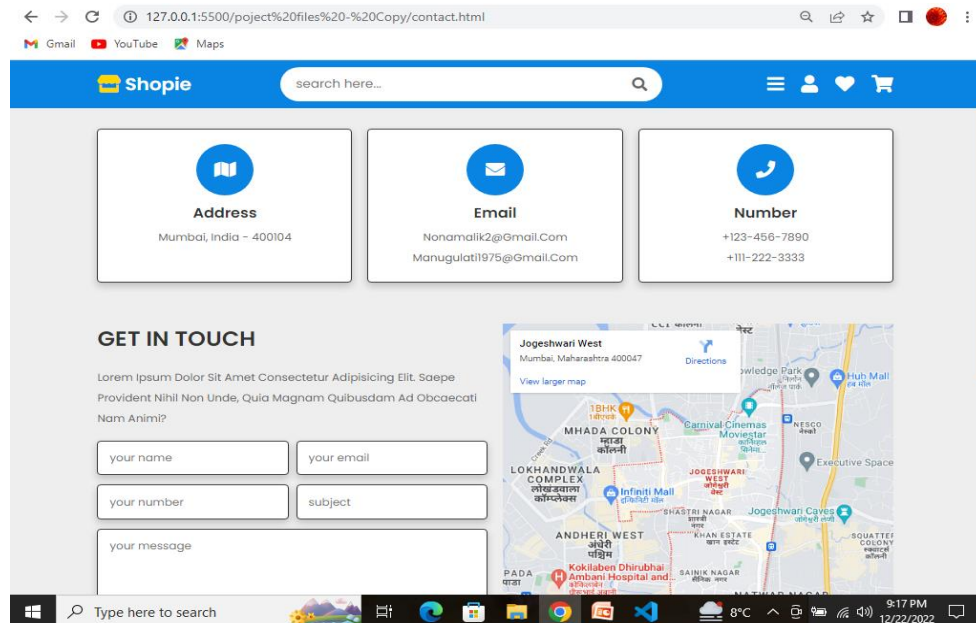


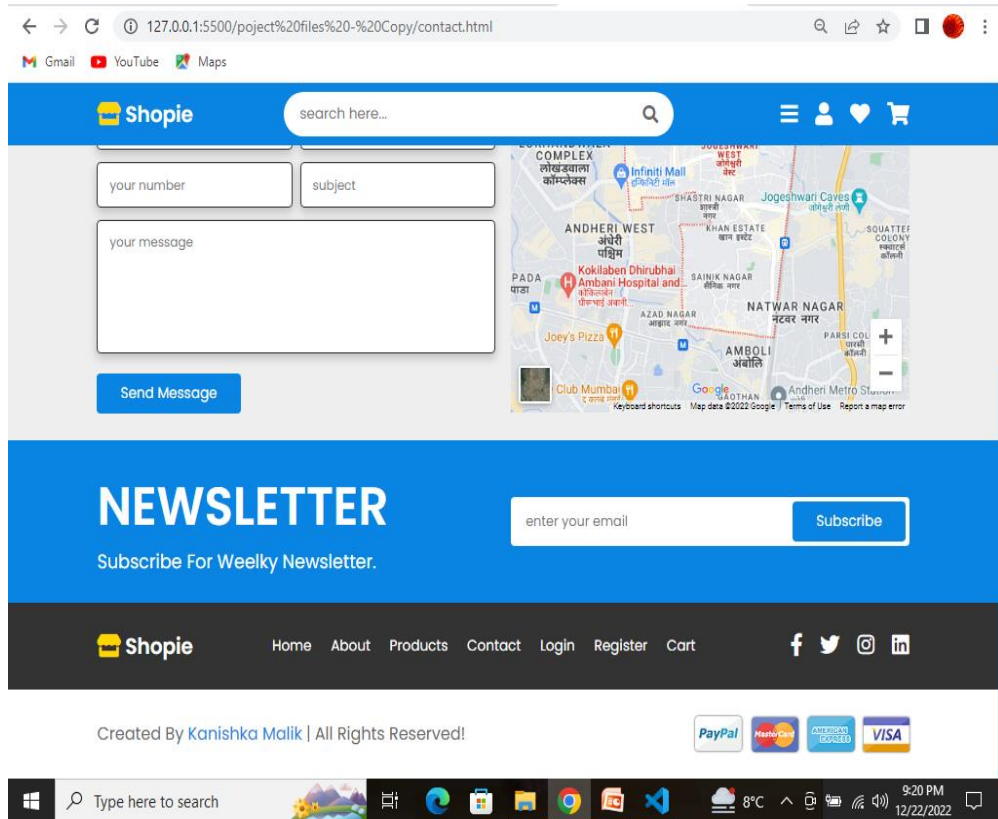
PRODUCTS PAGE



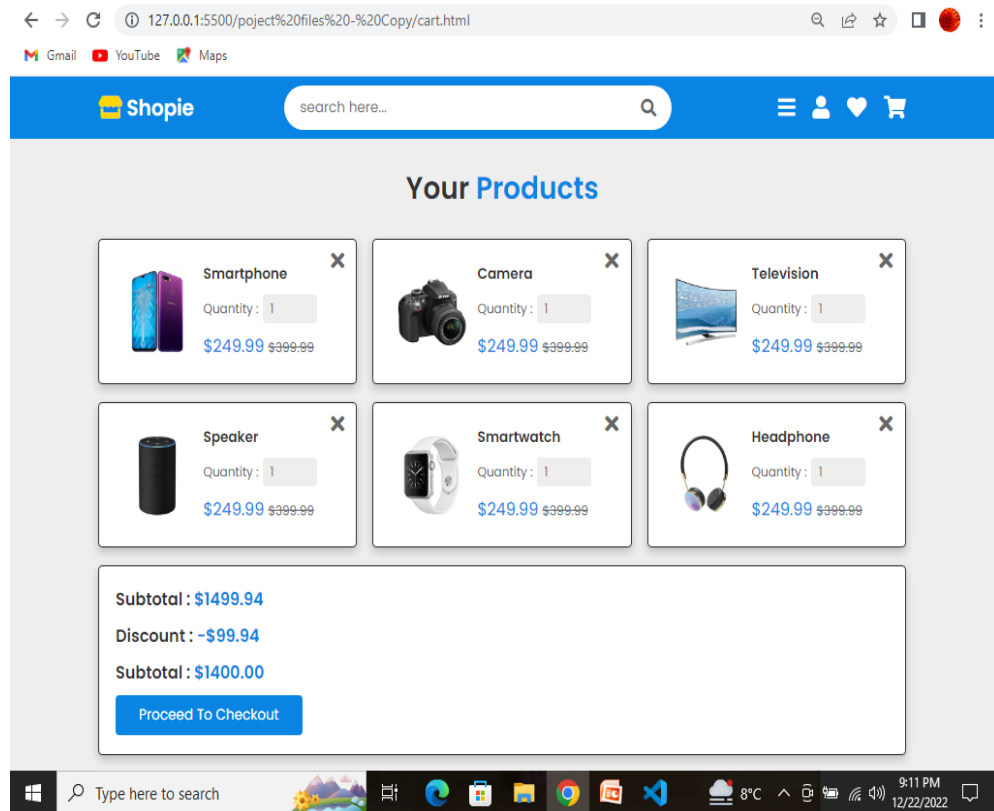


CONTACT PAGE

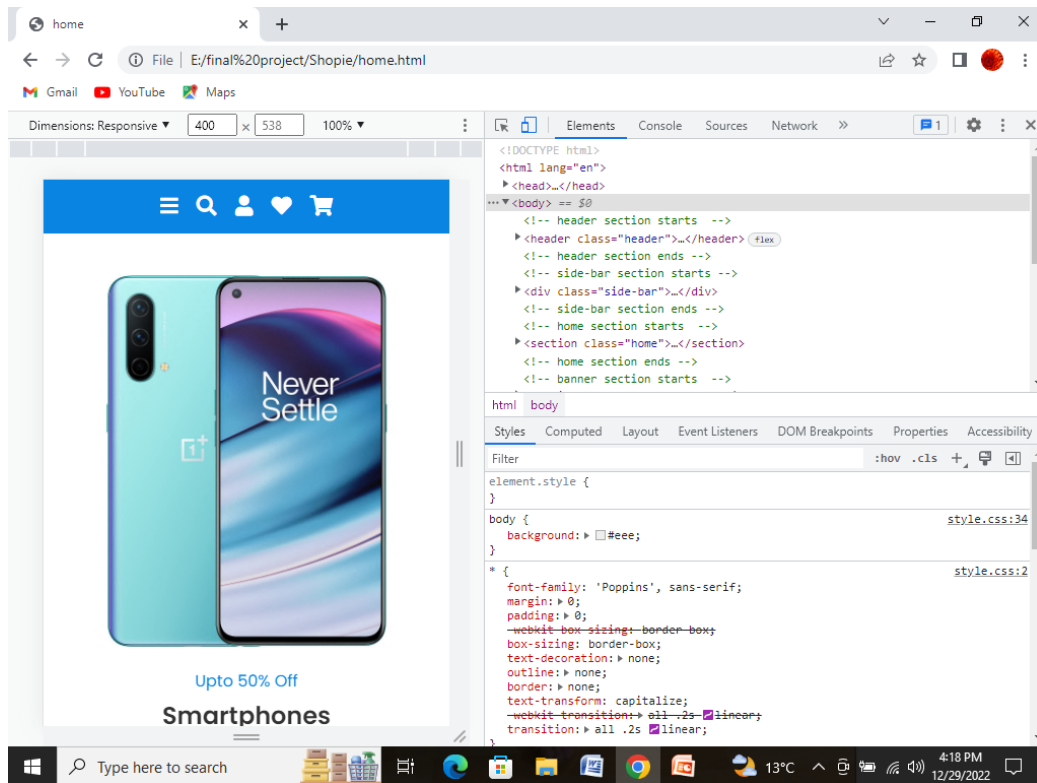




CART PAGE



RESPONSIVE LOOK



CHAPTER-4 TESTING

4.1 DEFINITION

Software testing is a process, to evaluate the functionality of a software application with an intent to find whether the developed software met the specified requirements or not and to identify the defects to ensure that the product is defect-free in order to produce the quality product.

Let's see the standard definition, software testing types such as manual and automation testing, testing methods, testing approaches, and types of black-box testing.

Software Testing Definition according to **ANSI/IEEE 1059** standard – A process of analyzing a software item to detect the differences between existing and required conditions (i.e., defects) and to evaluate the features of the software item.

TYPES OF SOFTWARE TESTING

Manual Testing: Manual testing is the process of testing software by hand to learn more about it, to find what is and isn't working. This usually includes verifying all the features specified in requirements documents, but often also includes the testers trying the software with the perspective of their end user's in mind. Manual test plans vary from fully scripted test cases, giving testers detailed steps and expected results, through to high-level guides that steer exploratory testing sessions. There are lots of sophisticated tools on the market to help with manual testing, but if you want a simple and flexible place to start, take a look at Testpad.

Automation Testing: Automation testing is the process of testing the software using an automation tool to find the defects. In this process, testers execute the test scripts and generate the test results automatically by using automation tools. Some of the famous automation testing tools for functional testing are QTP/UFT and Selenium.

TESTING METHODS

1. Static Testing
2. Dynamic Testing

Static Testing: It is also known as Verification in Software Testing. Verification is a static method of checking documents and files. Verification is the process, to ensure that whether we are building the product right i.e., to verify the requirements which we have and to verify whether we are developing the product accordingly or not.

Activities involved here are Inspections, Reviews, and Walkthroughs.

Dynamic Testing: It is also known as Validation in Software Testing. Validation is a dynamic process of testing the real product. Validation is the process, whether we are building the right product i.e., to validate the product which we have developed is right or not.

Activities involved in this is Testing the software application

TESTING APPROACHES

There are three types of software testing approaches.

1. White Box Testing
2. Black Box Testing
3. Grey Box Testing

WHITE BOX TESTING

It is also called as Glass Box, Clear Box, and Structural Testing. White Box Testing is based on the application's internal code structure. In white-box testing, an internal perspective of the system, as well as programming skills, are used to design test cases. This testing is usually done at the unit level.

TYPES OF WHITE BOX TESTING

1. Unit Testing
2. Static Analysis
3. Dynamic Analysis

4. Statement Coverage
5. Branch testing Coverage
6. Security Testing
7. Mutation Testing

Unit Testing: Unit testing is one of the basic steps, which is performed in the early stages. Most of the testers prefer performing to check if a specific unit of code is functional or not. Unit Testing is one of the common steps performed for every activity because it helps in removing basic and simple errors.

Static Analysis: As the term says, the step involves testing some of the static elements in the code. The step is conducted to figure out any of the possible defects or errors in the application code. The static analysis is an important step because it helps in filtering simple errors in the initial stage of the process.

Dynamic Analysis: Dynamic Analysis is the further step of static analysis in general path testing. Most of the people prefer performing both static and dynamic at the same time. The dynamic analysis helps in analyzing and executing the source code depending on the requirements. The final stage of the step helps in analyzing the output without affecting the process.

Statement Coverage: Statement coverage is one of the pivotal steps involved in the testing process. It offers a whole lot of advantages in terms of execution from time to time. The process takes place to check whether all the functionalities are working or not. Most of the testers use the step because it is designed to execute all the functions at least once. As the process starts, we will be able to figure out the possible errors in the web application.

Branch Testing Coverage: The modern-day software and web applications are not coded in a continuous mode because of various reasons. It is necessary to branch out at some point in time because it helps in segregating effectively. Branch coverage testing gives a wide room for testers to find quick results. It helps in verifying all the possible branches in terms of lines of code. The step offers better access to find and rectify any kind of abnormal behavior in the application easily.

Security Testing: It is a known fact that security is one of the primary protocol, which needs to be in place all the time. Most of the companies prefer having a regular security testing activity because of obvious reasons. It is essential to have a process in place to protect the application or software automatically. Security testing is more like a process because it comes with a lot of internal steps to complete. It verifies and rectifies any kind of unauthorized access to the system. The process helps in avoiding any kind of breach because of hacking or cracking practices. Security testing requires a set of techniques, which deal with a sophisticated testing environment.

Mutation Testing: The last step in the process and requires a lot of time to complete effectively. Mutation testing is generally conducted to re-check any kind of bugs in the system. The step is carried out to ensure using the right strategy because of various reasons. It gives enough information about the strategy or a code to enhance the system from time to time.

BLACK BOX TESTING

It is also called as Behavioral/Specification-Based/Input-Output Testing. Black Box Testing is a software testing method in which testers evaluate the functionality of the software under test without looking at the internal code structure.

TYPES OF BLACK BOX TESTING

1. Functionality Testing
2. Non-functionality Testing

Functional Testing: In simple words, what the system actually does is functional testing. To verify that each function of the software application behaves as specified in the requirement document. Testing all the functionalities by providing appropriate input to verify whether the actual output is matching the expected output or not. It falls within the scope of black-box testing and the testers need not concern about the source code of the application.

Non-functional Testing: In simple words, how well the system performs is non-functionality testing. Non-functional testing refers to various aspects of the software such as performance, load, stress, scalability, security, compatibility, etc., The Main focus is to improve the user experience on how fast the system responds to a request.

GREY BOX TESTING

Grey box is the combination of both White Box and Black Box Testing. The tester who works on this type of testing needs to have access to design documents. This helps to create better test cases in this process.

TESTING LEVELS

1. Unit Testing
2. Integration Testing
3. System Testing
4. Acceptance Testing

Unit Testing: Unit Testing is done to check whether the individual modules of the source code are working properly. i.e. testing each and every unit of the application separately by the developer in the developer's environment. It is AKA Module Testing or Component Testing.

Integration Testing: Integration Testing is the process of testing the connectivity or data transfer between a couple of unit tested modules. It is AKA I&T Testing or String Testing. It is subdivided into the Top-Down Approach, Bottom-Up Approach, and Sandwich Approach (Combination of Top-Down and Bottom-Up).

System Testing (End to End Testing): It's a black box testing. Testing the fully integrated application this is also called as an end to end scenario testing. To ensure that the software works in all intended target systems. Verify thorough testing of every input in the application to check for desired outputs. Testing of the user's experiences with the application.

Acceptance Testing: To obtain customer sign-off so that software can be delivered and payments received. Types of Acceptance Testing are Alpha, Beta & Gamma Testing.

NEED OF SOFTWARE TESTING

As per the current trend, due to constant change and development in digitization, our lives are improving in all areas. The way we work is also changed. We access our bank online, we do shopping online, we order food online, and many more. We rely on software and systems. What if these systems turn out to be defective. We all know that one small bug shows a huge impact on business in terms of financial loss and goodwill. To deliver a quality product, we need to have testing in the Software Development Process. Some of the reasons why testing becomes a very significant and integral part of the field of information technology are as follows.

1. Cost-effectiveness
2. Customer Satisfaction
3. Security
4. Product Quality

COST-EFFECTIVENESS

As a matter of fact, design defects can never be completely ruled out for any complex system. It is not because developers are careless but because the complexity of a system is intractable. If the design issues go undetected, then it will become more difficult to trace back defects and rectify it. It will become more expensive to fix it. Sometimes, while fixing one bug we may introduce another one in some other module unknowingly. If the bugs can be identified in the early stages of development then it costs much less to fix them. That is why it is important to find defects in the early stages of the software development life cycle. One of the benefits of testing is cost-effectiveness.

It is better to start testing earlier and introduce it in every phase of the software development life cycle and regular testing is needed to ensure that the application is developed as per the requirement.

CUSTOMER SATISFACTION

In any business, the ultimate goal is to give the best customer satisfaction. Yes, customer satisfaction is very important. Software testing improves the user experience of an application and gives satisfaction to the customers. Happy customers mean more revenue for a business. One of the reasons why testing is necessary is to provide the best user experience.

SECURITY

This is probably the most sensitive and vulnerable part of testing. Testing (penetration testing & security testing) helps in product security. Hackers gain unauthorized access to data. These hackers steal user information and use it for their benefit. If your product is not secured, users won't prefer your product. Users always look for trusted products. Testing helps in removing vulnerabilities in the product.

To become a better Software QA you need to know all types of testing.

PRODUCT QUALITY

Software Testing is an art that helps in strengthening the market reputation of a company by delivering the quality product to the client as mentioned in the requirement specification documents.

Due to these reasons, software testing becomes a very significant and integral part of the Software Development process.

THE STEPS INVOLVED IN SOFTWARE TESTING

The steps involved during Unit testing are as follows:

1. Preparation of test cases.
2. Preparation of possible test data with all validation checks.
3. Complete code review of website.
4. Actual testing done manually.
5. Modifications done for errors found during testing.
6. Prepared the test result scripts.

Unit testing done included the testing of following items:

1. Functionality of entire website.

2. Validations for user input.
3. Testing module with all possible data sets.
4. Testing of functionality involved all types of calculations.
5. Commenting standard in sources.

The steps involved during Unit testing are as follows:

- Integration of all modules in the website.
- Preparation of test cases.
- Preparation of possible test data with all validation checks.
- Actual testing done manually.
- Recording of all the reproduced errors.
- Modifications done for errors found during testing.
- Prepared test results after rectification of errors.

The system testing done included the testing of following items:

1. Functionality of website as a whole.
2. User interface of system.
3. Responsiveness of website on different devices.
4. Testing the dependent modules together with all possible test data scripts.
5. Verification and validation testing.
6. Testing the reports with all functionality.

DEBUGGING & CODE IMPROVEMENT

In ideal worlds, all programmers would be so skilled and attentive to detail that they would write bug-free code. Unfortunately, we do not live in an ideal world. As such, debugging, or tracking down the source of errors and erroneous result, is an important task that all developers need to perform before they allow end-user to use their applications. We will discuss some techniques for reducing the number of bugs in code up front.

There are three categories of bugs

Syntax error:

These errors occur when code breaks the rule of the language, such as visual Basic sub statement without a closing End sub, or a forgotten closing curly braces ({}) in c#. These error the easiest to locate. The language compiler or integrated development environment (IDE) will alert you to them and will not allow you to compile your program until you correct them.

Semantic error

These errors occur in code that is correct according to rules of the compiler, but that causes unexpected problems such as crashes or hanging on execution. A good example is code that execute in a loop but never exists the loop, either because the loop depends on the variable whose values was expected to be something different than it actually was or because the programmer forget to increment the loop counter. Another category of errors in this area includes requesting a field from a dataset, there is no way to tell if the field actually exists at compile time. these bugs are harder to detect and are one type of running error.

Logic error

Logic errors are like semantic errors, logic errors are runtime error. That is, they occur while the program is running. But unlike semantic errors, logic errors do not cause the application to crash or hang. Logic error results in unexpected values or output. This can be a result of

something as simple as a mistyped variables name that happens to match another declared variable in the program. This type of error can be extremely difficult to track down to eliminate.

CODE INSPECTION

In the website development, source code is inspected side by side on any of the web browser with the help of the inspect feature present on the browser. This allows us to rectify the errors; also web page can be viewed with different aspect ratios according to the laptop, mobile phone or tab screens. In this we can make changes according to our choice even at the time of inspecting and then can copy paste the changes.

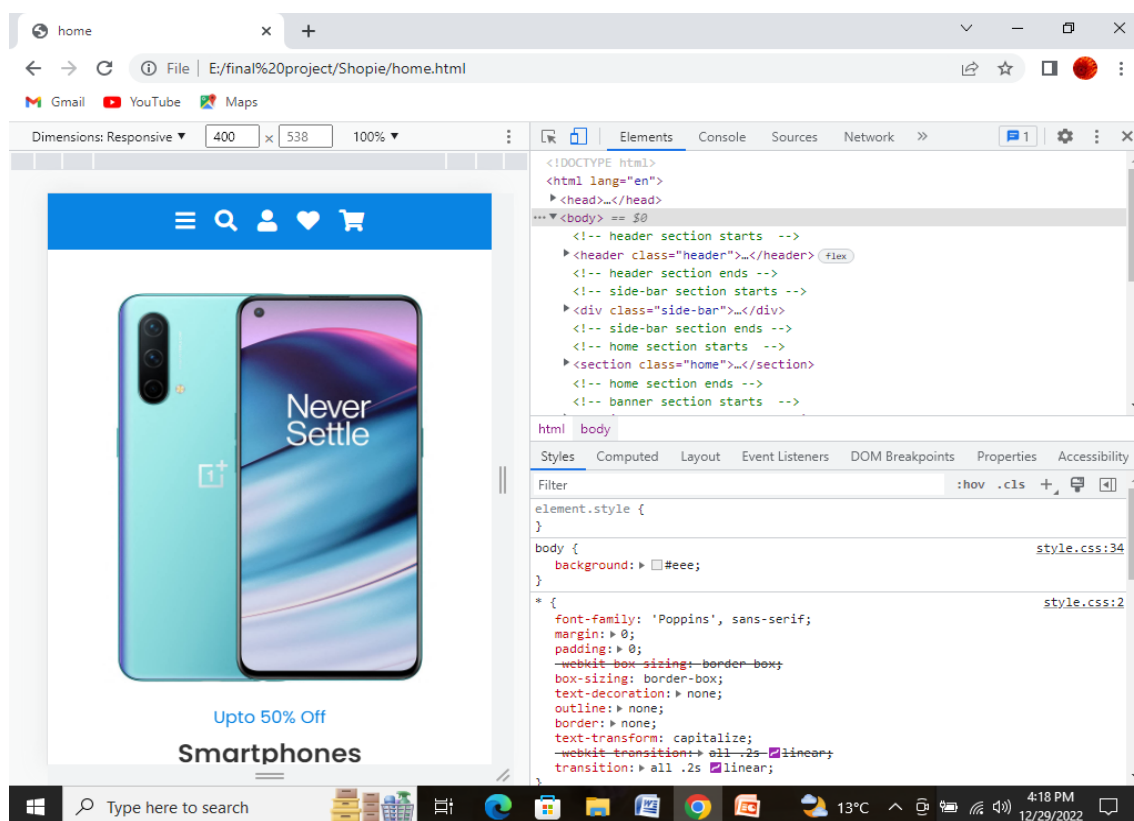


Fig:- 4.1

In fig:4.1, you can see we can easily inspect our website and make changes. It helps the user to rectify their mistakes if any. Also, you can make proper alignments and adjustments using this inspect tool and after testing you can make changes in main code.

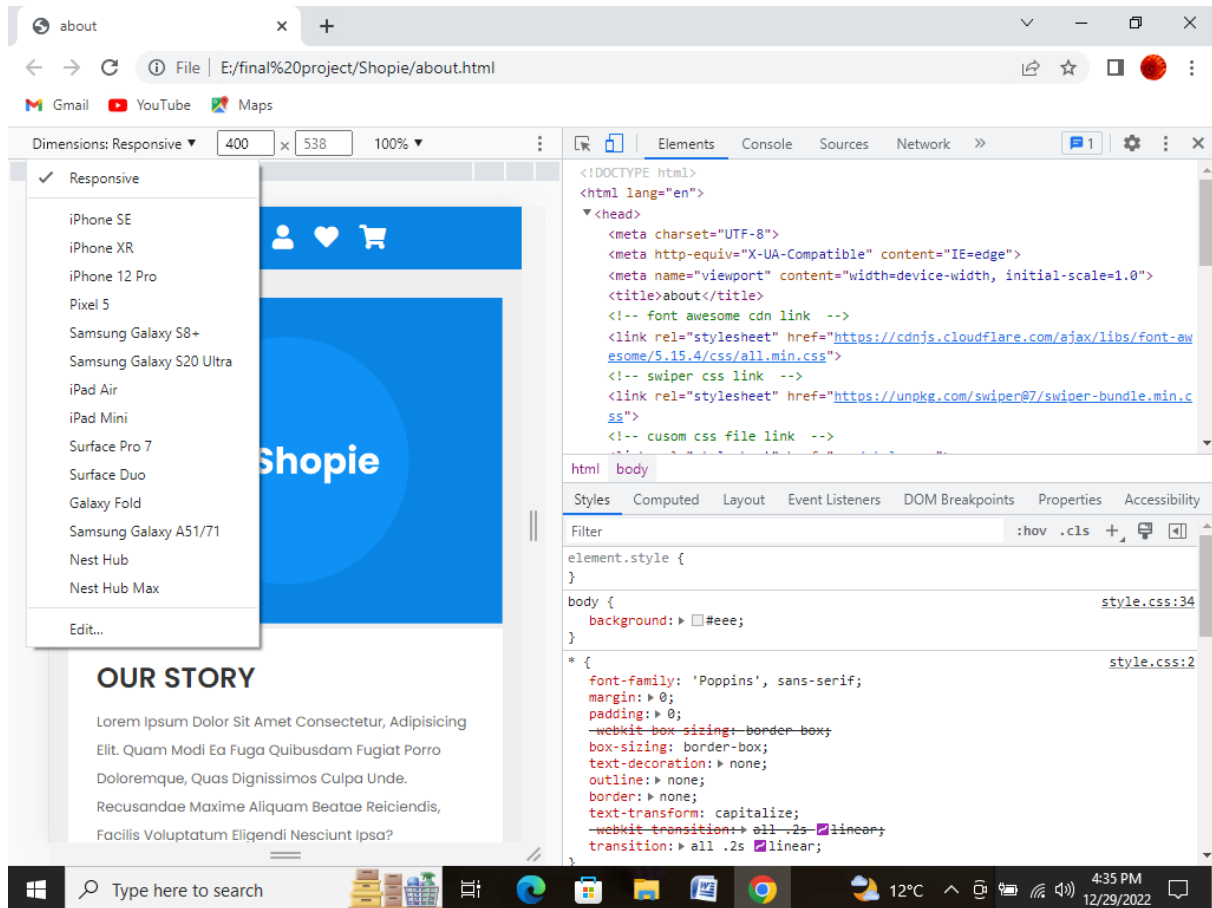


Fig:- 4.2

In fig: 4.2, user can toggle between different screen modes (laptop, mobile, or tab screen) before finalizing the code, so that it remains responsive throughout all the screens. This is the easiest method to for debugging and make changes while inspecting and copy paste them in main code.

CHAPTER-5 IMPLEMENTATION

DETAILED DESIGN OF IMPLEMENTATION

This phase of the systems development life cycle refines hardware and software specifications, establishes programming plans, trains users and implements extensive testing procedures, to evaluate design and operating specifications and/or provide the basis for further modification.

TECHNICAL DESIGN

This activity builds upon specifications produced during new system design, adding detailed technical specifications and documentation.

TEST SPECIFICATIONS AND PLANNING

This activity prepares detailed test specifications for individual modules and programs, job streams, subsystems, and for the system as a whole.

PROGRAM AND TESTING

This activity encompasses actual development, writing, and testing of program units or modules.

USER TRAINING

This activity encompasses writing user procedure manuals, preparation of user training materials, conducting training programs, and testing procedures.

ACCEPTANCE TESTING

A final procedural review to demonstrate a system and secure user approval before a system becomes operational.

INSTALLATION PHASE

In this phase the new computerized system is installed, the conversion to new procedures is fully implemented, and the potential of the new system is explored.

SYSTEM INSTALLATION

The process of starting the actual use of a system and training user personnel in its operation.

REVIEW PHASE

This phase evaluates the successes and failures during a systems development project, and to measure the results of a new Computerized Tran system in terms of benefits and savings projected at the start of the project.

DEVELOPMENT RECAP

A review of a project immediately after completion to find successes and potential problems in future work.

POST IMPLEMENTATION REVIEW

A review, conducted after a new system has been in operation for some time, to evaluate actual system performance against original expectations and projections for cost-benefit improvements. Also identifies maintenance projects to enhance or improve the system.

SYSTEM ANALYSIS

System analysis is a process of gathering and interpreting facts, diagnosing problems and the information about the Personal Portfolio Website to recommend improvements on the system. It is a problem solving activity that requires intensive communication between the system users and system developers. System analysis or study is an important phase of any system development process. The system is studied to the minutest detail and analyzed. The system analyst plays the role of the interrogator and dwells deep into the working of the present system. The system is viewed as a whole and the input to the system are identified. The outputs from the organizations are traced to the various processes. System analysis is concerned with becoming aware of the problem, identifying the relevant and decisional variables,

analyzing and synthesizing the various factors and determining an optimal or at least a satisfactory solution or program of action. A detailed study of the process must be made by various techniques like interviews, questionnaires etc. The data collected by these sources must be scrutinized to arrive to a conclusion. The conclusion is an understanding of how the system functions. This system is called the existing system. Now the existing system is subjected to close study and problem areas are identified. The designer now functions as a problem solver and tries to sort out the difficulties that the enterprise faces. The solutions are given as proposals. The proposal is then weighed with the existing system analytically and the best one is selected. The proposal is presented to the user for an endorsement by the user. The proposal is reviewed on user request and suitable changes are made. This is loop that ends as soon as the user is satisfied with proposal. Preliminary study is the process of gathering and interpreting facts, using the information for further studies on the system. Preliminary study is problem solving activity that requires intensive communication between the system users and system developers. It does various feasibility studies. In these studies a rough figure of the system activities can be obtained, from which the decision about the strategies to be followed for effective system study and analysis can be taken.

5.1 WEBSITE DEVELOPMENT

Main page(HTML)

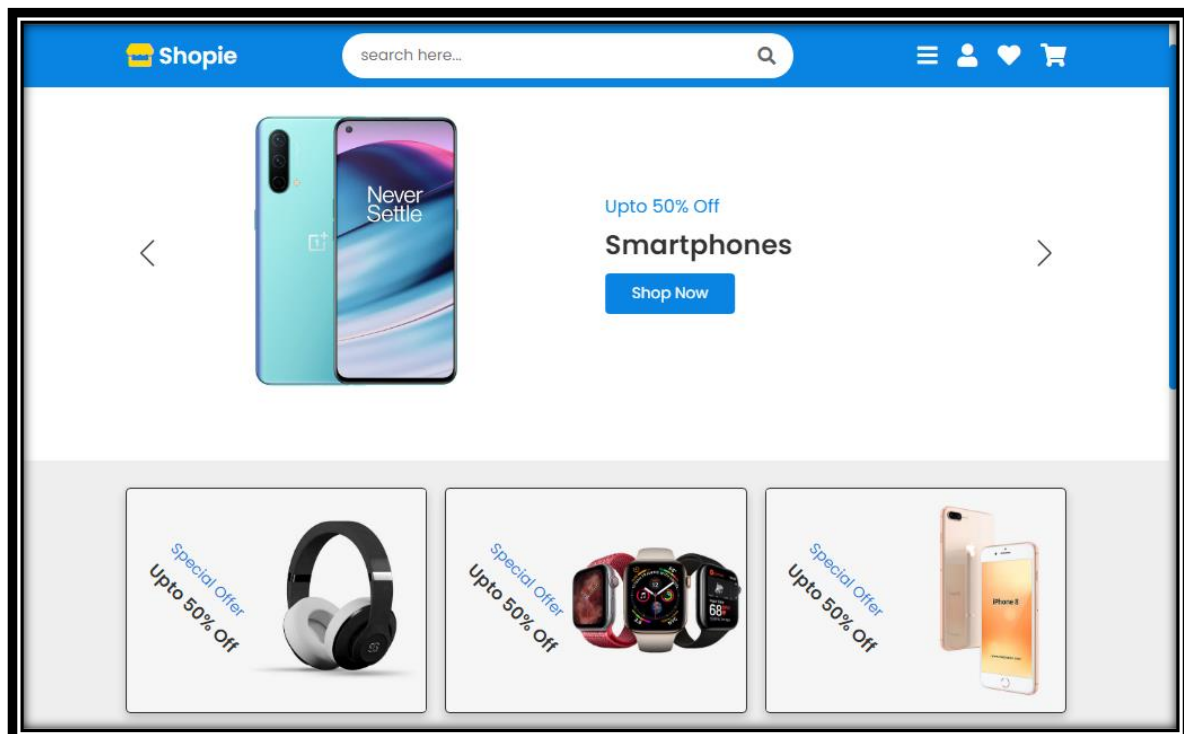


Fig:- 5.1(Main Page)

CODE SNAPSHOTS

Home page code(Html,Bootstrap)

```
File Edit Selection View Go Run Terminal Help home.html - final project - Visual Studio Code
home.html X # style.css
Shopie > home.html > html > body
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <meta charset="UTF-8">
5 <meta http-equiv="X-UA-Compatible" content="IE=edge">
6 <meta name="viewport" content="width=device-width, initial-scale=1.0">
7 <title>home</title>
8
9 <!-- font awesome cdn link -->
10 <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/5.15.4/css/all.min.css">
11
12 <!-- swiper css link -->
13 <link rel="stylesheet" href="https://unpkg.com/swiper@7/swiper-bundle.min.css" />
14
15 <!-- custom css file link -->
16 <link rel="stylesheet" href="css/style.css">
17
18 </head>
19 <body>
20
21 <!-- header section starts -->
22
23 <header class="header">
24
25 <a href="home.html" class="logo"> <i class="fas fa-store"></i> shopie </a>
26
27 <form action="" class="search-form">
28 <input type="search" id="search-box" placeholder="search here...">
29 <label for="search-box" class="fas fa-search"></label>
30 </form>
31
32 <div class="icons">
```

```
File Edit Selection View Go Run Terminal Help home.html - final project - Visual Studio Code
home.html X # style.css
Shopie > home.html > html > body
33 <div id="menu-btn" class="fas fa-bars"></div>
34 <div id="search-btn" class="fas fa-search"></div>
35 <a href="login.html" class="fas fa-user"></a>
36 <a href="#" class="fas fa-heart"></a>
37 <a href="cart.html" class="fas fa-shopping-cart"></a>
38 </div>
39
40 </header>
41
42 <!-- header section ends -->
43
44 <!-- side-bar section starts -->
45
46 <div class="side-bar">
47
48 <div id="close-side-bar" class="fas fa-times"></div>
49
50 <div class="user">
51 
52 <h3>Kanishka Malik</h3>
53 <a href="#">log out</a>
54 </div>
55
56 <nav class="navbar">
57 <a href="home.html"> <i class="fas fa-angle-right"></i> home </a>
58 <a href="about.html"> <i class="fas fa-angle-right"></i> about </a>
59 <a href="products.html"> <i class="fas fa-angle-right"></i> products </a>
60 <a href="contact.html"> <i class="fas fa-angle-right"></i> contact </a>
61 <a href="login.html"> <i class="fas fa-angle-right"></i> login </a>
62 <a href="register.html"> <i class="fas fa-angle-right"></i> register </a>
63 <a href="cart.html"> <i class="fas fa-angle-right"></i> cart </a>
64 </nav>
```

```
File Edit Selection View Go Run Terminal Help home.html - final project - Visual Studio Code
home.html X # style.css
Shopie > home.html > html > body
66 </div>
67
68 <!-- side-bar section ends -->
69
70 <!-- home section starts -->
71
72 <section class="home">
73
74   <div class="swiper home-slider">
75
76     <div class="swiper-wrapper">
77
78       <div class="swiper-slide slide">
79         <div class="image">
80           
81         </div>
82         <div class="content">
83           <span>upto 50% off</span>
84           <h3>smartphones</h3>
85           <a href="#" class="btn">shop now</a>
86         </div>
87       </div>
88
89       <div class="swiper-slide slide">
90         <div class="image">
91           
92         </div>
93         <div class="content">
94           <span>upto 50% off</span>
95           <h3>smartwatch</h3>
96           <a href="#" class="btn">shop now</a>
97         </div>
98       </div>
99     </div>
100   </div>
101
102   <div class="swiper-button-next"></div>
103   <div class="swiper-button-prev"></div>
104 </div>
105 </section>
106
107 <!-- home section ends -->
108
109 <!-- banner section starts -->
110
111 <section class="banner">
112
113   <div class="box-container">
114
115     <a href="#" class="box">
116       
117       <div class="content">
118
119
```

```
File Edit Selection View Go Run Terminal Help home.html - final project - Visual Studio Code
home.html X # style.css
Shopie > home.html > html > body
98 </div>
99
100   <div class="swiper-slide slide">
101     <div class="image">
102       
103     </div>
104     <div class="content">
105       <span>upto 50% off</span>
106       <h3>headphones</h3>
107       <a href="#" class="btn">shop now</a>
108     </div>
109   </div>
110 </div>
111
112   <div class="swiper-button-next"></div>
113   <div class="swiper-button-prev"></div>
114 </div>
115 </section>
116
117 <!-- home section ends -->
118
119 <!-- banner section starts -->
120
121 <section class="banner">
122
123   <div class="box-container">
124
125     <a href="#" class="box">
126       
127       <div class="content">
128
129
```

```
home.html - final project - Visual Studio Code
File Edit Selection View Go Run Terminal Help
home.html X # style.css
Shopie > home.html > html > body
130 <div class="content">
131 <span>special offer</span>
132 <h3>upto 50% off</h3>
133 </div>
134 </a>
135
136 <a href="#" class="box">
137 
138 <div class="content">
139 <span>special offer</span>
140 <h3>upto 50% off</h3>
141 </div>
142 </a>
143
144 <a href="#" class="box">
145 
146 <div class="content">
147 <span>special offer</span>
148 <h3>upto 50% off</h3>
149 </div>
150 </a>
151
152 </div>
153
154 </section>
155
156 <!-- banner section ends -->
157
158 <!-- arrivals section starts -->
159
160 <section class="arrivals">
161
```

```
home.html - final project - Visual Studio Code
File Edit Selection View Go Run Terminal Help
home.html X # style.css
Shopie > home.html > html > body
160 <section class="arrivals">
161
162 <h1 class="heading"> new <span>arrivals</span> </h1>
163
164 <div class="box-container">
165
166 <div class="box">
167 <div class="image">
168 
169 
170 </div>
171 <div class="content">
172 <h3>HD television</h3>
173 <div class="price"> $249.99 <span>$399.99</span> </div>
174 <div class="stars">
175 <i class="fas fa-star"></i>
176 <i class="fas fa-star"></i>
177 <i class="fas fa-star"></i>
178 <i class="fas fa-star"></i>
179 <i class="fas fa-star-half-alt"></i>
180 </div>
181 </div>
182 </div>
183
184 <div class="box">
185 <div class="image">
186 
187 
188 </div>
189 <div class="content">
190 <h3>lenovo laptop</h3>
191 <div class="price"> $249.99 <span>$399.99</span> </div>
```

```
File Edit Selection View Go Run Terminal Help home.html - final project - Visual Studio Code
home.html X # style.css
Shopie > > home.html > html > body
192 <div class="stars">
193 <i class="fas fa-star"></i>
194 <i class="fas fa-star"></i>
195 <i class="fas fa-star"></i>
196 <i class="fas fa-star"></i>
197 <i class="fas fa-star-half-alt"></i>
198 </div>
199 </div>
200
201
202 <div class="box">
203 <div class="image">
204 
205 
206 </div>
207 <div class="content">
208 <h3>new smartphone</h3>
209 <div class="price"> $249.99 <span>$399.99</span> </div>
210 <div class="stars">
211 <i class="fas fa-star"></i>
212 <i class="fas fa-star"></i>
213 <i class="fas fa-star"></i>
214 <i class="fas fa-star"></i>
215 <i class="fas fa-star-half-alt"></i>
216 </div>
217 </div>
218 </div>
219
220 <div class="box">
221 <div class="image">
222 
223 
```

```
File Edit Selection View Go Run Terminal Help home.html - final project - Visual Studio Code
home.html X # style.css
Shopie > > home.html > html > body
224 </div>
225
226 <div class="content">
227 <h3>new printer</h3>
228 <div class="price"> $249.99 <span>$399.99</span> </div>
229 <div class="stars">
230 <i class="fas fa-star"></i>
231 <i class="fas fa-star"></i>
232 <i class="fas fa-star"></i>
233 <i class="fas fa-star"></i>
234 <i class="fas fa-star-half-alt"></i>
235 </div>
236 </div>
237
238 <div class="box">
239 <div class="image">
240 
241 
242 </div>
243 <div class="content">
244 <h3>new headphones</h3>
245 <div class="price"> $249.99 <span>$399.99</span> </div>
246 <div class="stars">
247 <i class="fas fa-star"></i>
248 <i class="fas fa-star"></i>
249 <i class="fas fa-star"></i>
250 <i class="fas fa-star"></i>
251 <i class="fas fa-star-half-alt"></i>
252 </div>
253 </div>
254 </div>
255
```

```
255 <div class="box">
256 <div class="image">
257 
258 
259 </div>
260 <div class="content">
261 <h3>new speakers</h3>
262 <div class="price"> $249.99 <span>$399.99</span> </div>
263 <div class="stars">
264 <i class="fas fa-star"></i>
265 <i class="fas fa-star"></i>
266 <i class="fas fa-star"></i>
267 <i class="fas fa-star"></i>
268 <i class="fas fa-star"></i>
269 <i class="fas fa-star-half-alt"></i>
270 </div>
271 </div>
272 </div>
273 </div>
274 </div>
275 </section>
276 <!-- arrivals section ends -->
277
278 <!-- arrivals section ends -->
279
280
281
282
283
284
285
286
```

About page code(Html,Bootstrap)

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <meta charset="UTF-8">
5 <meta http-equiv="X-UA-Compatible" content="IE=edge">
6 <meta name="viewport" content="width=device-width, initial-scale=1.0">
7 <title>about</title>
8
9 <!-- font awesome cdn link -->
10 <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/font-awesome@5.15.4/css/all.min.css">
11
12 <!-- swiper css link -->
13 <link rel="stylesheet" href="https://unpkg.com/swiper@7/swiper-bundle.min.css" />
14
15 <!-- custom css file link -->
16 <link rel="stylesheet" href="css/style.css">
17 </head>
18 <body>
19
20 <!-- header section starts -->
21 <header class="header">
22
23 <a href="home.html" class="logo"> <i class="fas fa-store"></i> shopie </a>
24
25 <form action="" class="search-form">
26 <input type="search" id="search-box" placeholder="search here...">
27 <label for="search-box" class="fas fa-search"></label>
28 </form>
29
30 <div class="icons">
31
32
```

```
File Edit Selection View Go Run Terminal Help about.html - final project - Visual Studio Code
home.html # style.css about.html X
Shopie > about.html > ...
32 <div class="icons">
33 <div id="menu-btn" class="fas fa-bars"></div>
34 <div id="search-btn" class="fas fa-search"></div>
35 <a href="login.html" class="fas fa-user"></a>
36 <a href="#" class="fas fa-heart"></a>
37 <a href="cart.html" class="fas fa-shopping-cart"></a>
38 </div>
39
40 </header>
41
42 <!-- header section ends -->
43
44 <!-- side-bar section starts -->
45
46 <div class="side-bar">
47
48 <div id="close-side-bar" class="fas fa-times"></div>
49
50 <div class="user">
51 
52 <h3>Kanishka Malik</h3>
53 <a href="#">log out</a>
54 </div>
55
56 <nav class="navbar">
57 <a href="home.html"> <i class="fas fa-angle-right"></i> home </a>
58 <a href="about.html"> <i class="fas fa-angle-right"></i> about </a>
59 <a href="products.html"> <i class="fas fa-angle-right"></i> products </a>
60 <a href="contact.html"> <i class="fas fa-angle-right"></i> contact </a>
61 <a href="login.html"> <i class="fas fa-angle-right"></i> login </a>
62 <a href="register.html"> <i class="fas fa-angle-right"></i> register </a>
63 <a href="cart.html"> <i class="fas fa-angle-right"></i> cart </a>
64 </nav>
```

```
File Edit Selection View Go Run Terminal Help about.html - final project - Visual Studio Code
home.html # style.css about.html X
Shopie > about.html > ...
65
66 </div>
67
68 <!-- side-bar section ends -->
69
70 <!-- about section starts -->
71
72 <section class="about">
73
74 <div class="image">
75 
76 </div>
77
78 <div class="content">
79 <h3>our story</h3>
80 <p>Lorem ipsum dolor sit amet consectetur, adipisicing elit. Quam modi ea fuga quibusdam fugia
81 <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Accusamus, distinctio et? Odio vol
82 <a href="#" class="btn">read more</a>
83 </div>
84
85 </section>
86
87 <!-- about section ends -->
88
89 <!-- faq section starts -->
90
91 <section class="faq">
92
93 <h1 class="heading"> questions & <span>answers</span> </h1>
94
95 <div class="accordion-container">
96
97 <div class="accordion">
```



```
File Edit Selection View Go Run Terminal Help about.html - final project - Visual Studio Code
home.html # style.css about.html X
Shopie > about.html > ...
97 <div class="accordion">
98 <div class="accordion-heading">
99 <h3>how to make websites?</h3>
100 <i class="fas fa-angle-down"></i>
101 </div>
102 <p class="accordioin-content">
103 Lorem ipsum dolor, sit amet consectetur adipisicing elit. Minus, laboriosam non eligen
104 </p>
105 </div>
106
107 <div class="accordion">
108 <div class="accordion-heading">
109 <h3>how to place order online?</h3>
110 <i class="fas fa-angle-down"></i>
111 </div>
112 <p class="accordioin-content">
113 Lorem ipsum dolor, sit amet consectetur adipisicing elit. Minus, laboriosam non eligen
114 </p>
115 </div>
116
117 <div class="accordion">
118 <div class="accordion-heading">
119 <h3>how to pay online?</h3>
120 <i class="fas fa-angle-down"></i>
121 </div>
122 <p class="accordioin-content">
123 Lorem ipsum dolor, sit amet consectetur adipisicing elit. Minus, laboriosam non eligen
124 </p>
125 </div>
126
127 <div class="accordion">
128 <div class="accordion-heading">
```

```
File Edit Selection View Go Run Terminal Help about.html - final project - Visual Studio Code
home.html # style.css about.html X
Shopie > about.html > ...
150 <!-- faq section ends -->
151
152 <!-- review section starts -->
153
154 <section class="review">
155
156 <h1 class="heading"> clients <span>review</span> </h1>
157
158 <div class="swiper review-slider">
159
160 <div class="swiper-wrapper">
161
162 <div>
163 The div element has no special meaning at all. It represents its children. It can be
164 used with the class, lang, and title attributes to mark up semantics common to a
165 group of consecutive elements.
166 MDN Reference
167 </div>
168
169 <div class="swiper-slide slide">
170 
171 <h3>john deo</h3>
172 <span>designer</span>
173 <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Dolore, culpa non eaque il
174 </p>
175 </div>
176
177 <div class="swiper-slide slide">
178 
179 <h3>john deo</h3>
180 <span>designer</span>
181 <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Voluptatem, culpa. Ducimus
182 </p>
183 </div>
```

```

Shopie > about.html > ...
181 <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Voluptatem, culpa. Ducimus
182 </div>
183
184 <div class="swiper-slide slide">
185 
186 <h3>John deo</h3>
187 <span>designer</span>
188 <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Fugit explicabo placeat la
189 </div>
190
191 <div class="swiper-slide slide">
192 
193 <h3>John deo</h3>
194 <span>designer</span>
195 <p>Lorem ipsum dolor sit, amet consectetur adipisicing elit. Incidunt explicabo laboru
196 </div>
197
198 <div class="swiper-slide slide">
199 
200 <h3>John deo</h3>
201 <span>designer</span>
202 <p>Lorem ipsum dolor sit amet consectetur adipisicing elit. Doloribus earum quas quo n
203 </div>
204
205 </div>
206
207 </div>
208
209 </section>
210
211 <!-- review section ends -->
212
213

```

Products page code(Html,Bootstrap)

```

Shopie > products.html > ...
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4 <meta charset="UTF-8">
5 <meta http-equiv="X-UA-Compatible" content="IE=edge">
6 <meta name="viewport" content="width=device-width, initial-scale=1.0">
7 <title>products</title>
8
9 <!-- font awesome cdn link -->
10 <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/font-awesome@5.15.4/css/all.min.js">
11
12 <!-- swiper css link -->
13 <link rel="stylesheet" href="https://unpkg.com/swiper@7/swiper-bundle.min.css" />
14
15 <!-- custom css file link -->
16 <link rel="stylesheet" href="css/style.css">
17
18 </head>
19 <body>
20
21 <!-- header section starts -->
22
23 <header class="header">
24
25 <a href="home.html" class="logo"> <i class="fas fa-store"></i> shopie </a>
26
27 <form action="" class="search-form">
28 <input type="search" id="search-box" placeholder="search here...">
29 <label for="search-box" class="fas fa-search"></label>
30 </form>
31
32 <div class="icons">

```

```
File Edit Selection View Go Run Terminal Help products.html - final project - Visual Studio Code
home.html # style.css products.html X
Shopie > products.html > ...
40 </header>
41
42 <!-- header section ends -->
43
44 <!-- side-bar section starts -->
45
46 <div class="side-bar">
47
48   <div id="close-side-bar" class="fas fa-times"></div>
49
50   <div class="user">
51     
52     <h3>Kanishka Malik</h3>
53     <a href="#">log out</a>
54   </div>
55
56   <nav class="navbar">
57     <a href="home.html"> <i class="fas fa-angle-right"></i> home </a>
58     <a href="about.html"> <i class="fas fa-angle-right"></i> about </a>
59     <a href="products.html"> <i class="fas fa-angle-right"></i> products </a>
60     <a href="contact.html"> <i class="fas fa-angle-right"></i> contact </a>
61     <a href="login.html"> <i class="fas fa-angle-right"></i> login </a>
62     <a href="register.html"> <i class="fas fa-angle-right"></i> register </a>
63     <a href="cart.html"> <i class="fas fa-angle-right"></i> cart </a>
64   </nav>
65
66 </div>
67
68 <!-- side-bar section ends -->
69
70 <!-- category section starts -->
71
```

```
File Edit Selection View Go Run Terminal Help products.html - final project - Visual Studio Code
home.html # style.css products.html X
Shopie > products.html > ...
72 <section class="category">
73
74   <h1 class="heading"> shop by <span>category</span> </h1>
75
76   <div class="box-container">
77
78     <a href="#" class="box">
79       
80       <h3>televisions</h3>
81     </a>
82
83     <a href="#" class="box">
84       
85       <h3>smartphones</h3>
86     </a>
87
88     <a href="#" class="box">
89       
90       <h3>headphones</h3>
91     </a>
92
93     <a href="#" class="box">
94       
95       <h3>smartwatches</h3>
96     </a>
97
98     <a href="#" class="box">
99       
100      <h3>games</h3>
101    </a>
102
103    <a href="#" class="box">
```

```
File Edit Selection View Go Run Terminal Help products.html - final project - Visual Studio Code
home.html # style.css products.html X
Shopie > products.html > ...
118
119 <!-- products section starts -->
120
121 <section class="products">
122
123   <h1 class="heading"> featured <span>products</span> </h1>
124
125   <div class="box-container">
126
127     <div class="box">
128       <div class="image">
129         
130         
131         <div class="icons">
132           <a href="#" class="fas fa-shopping-cart"></a>
133           <a href="#" class="fas fa-search-plus"></a>
134           <a href="#" class="fas fa-heart"></a>
135           <a href="#" class="fas fa-share"></a>
136         </div>
137       </div>
138       <div class="content">
139         <h3>smartphone</h3>
140         <div class="price">$249.99 <span>$399.99</span></div>
141         <div class="stars">
142           <i class="fas fa-star"></i>
143           <i class="fas fa-star"></i>
144           <i class="fas fa-star"></i>
145           <i class="fas fa-star"></i>
146           <i class="fas fa-star-half-alt"></i>
147         </div>
148       </div>
149     </div>
150
```

```
File Edit Selection View Go Run Terminal Help products.html - final project - Visual Studio Code
home.html # style.css products.html X
Shopie > products.html > ...
347 <!-- products section ends -->
348
349 <!-- product banner section starts -->
350
351 <section class="product-banner">
352
353   <h1 class="heading"> <span>deal</span> of the day </h1>
354
355   <div class="box-container">
356
357     <div class="box">
358       
359       <div class="content">
360         <span>special offer</span>
361         <h3>upto 50% off</h3>
362         <a href="#" class="btn">shop now</a>
363       </div>
364     </div>
365
366     <div class="box">
367       
368       <div class="content">
369         <span>special offer</span>
370         <h3>upto 50% off</h3>
371         <a href="#" class="btn">shop now</a>
372       </div>
373     </div>
374   </div>
375
376
377 </section>
378
```

```
File Edit Selection View Go Run Terminal Help products.html - final project - Visual Studio Code
Shopie > products.html > ...
394
395 <!-- footer section starts -->
396
397 <section class="quick-links">
398
399   <a href="home.html" class="logo"> <i class="fas fa-store"></i> shopie </a>
400
401   <div class="links">
402     <a href="home.html"> home </a>
403     <a href="about.html"> about </a>
404     <a href="products.html"> products </a>
405     <a href="contact.html"> contact </a>
406     <a href="login.html"> login </a>
407     <a href="register.html"> register </a>
408     <a href="cart.html"> cart </a>
409   </div>
410
411   <div class="share">
412     <a href="#" class="fab fa-facebook-f"></a>
413     <a href="#" class="fab fa-twitter"></a>
414     <a href="#" class="fab fa-instagram"></a>
415     <a href="#" class="fab fa-linkedin"></a>
416   </div>
417
418 </section>
419
420 <section class="credit">
421
422   <p> created by <span>Kanishka Malik</span> | all rights reserved! </p>
423
424   
425
```

```
File Edit Selection View Go Run Terminal Help products.html - final project - Visual Studio Code
Shopie > products.html > ...
418 </section>
419
420 <section class="credit">
421
422   <p> created by <span>Kanishka Malik</span> | all rights reserved! </p>
423
424   
425
426 </section>
427
428 <!-- footer section ends -->
429
430
431
432
433 <!-- swiper js link -->
434 <script src="https://unpkg.com/swiper@7/swiper-bundle.min.js"></script>
435
436 <!-- custom js file link -->
437 <script src="js/script.js"></script>
438
439 </body>
440 </html>
```

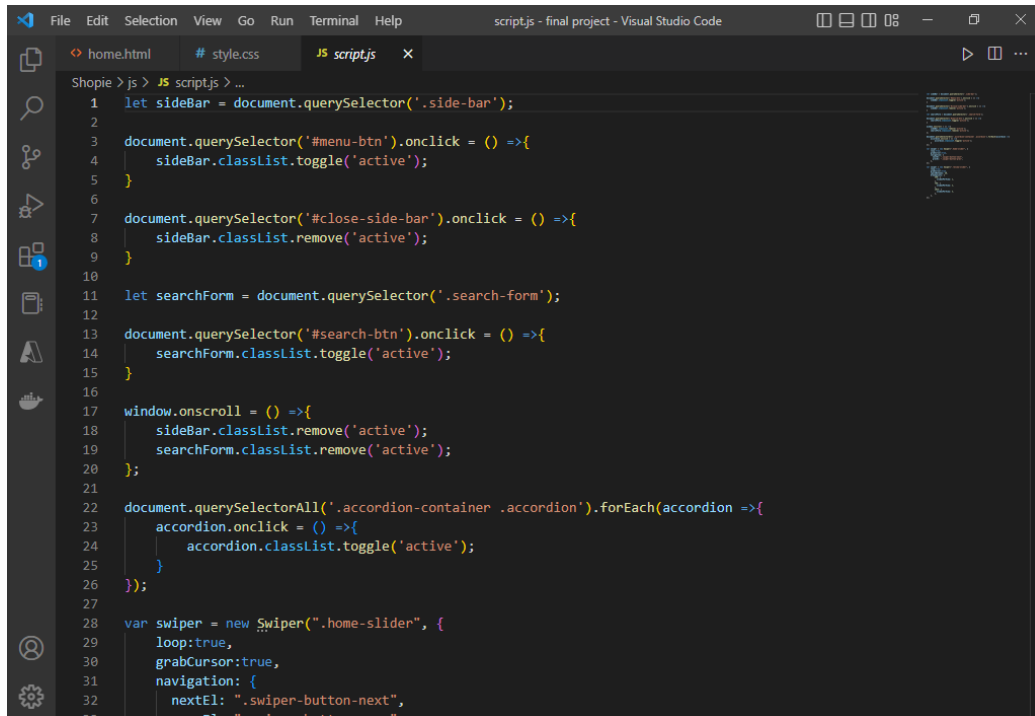
Cart page code(Html,Bootstrap)

```
Shopie > <> cart.html > ...
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta http-equiv="X-UA-Compatible" content="IE=edge">
6   <meta name="viewport" content="width=device-width, initial-scale=1.0">
7   <title>cart</title>
8
9   <!-- font awesome cdn link -->
10  <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/font-awesome@5.15.4/css/all.min.css">
11
12  <!-- swiper css link -->
13  <link rel="stylesheet" href="https://unpkg.com/swiper@7/swiper-bundle.min.css" />
14
15  <!-- custom css file link -->
16  <link rel="stylesheet" href="css/style.css">
17
18 </head>
19 <body>
20
21 <!-- header section starts -->
22
23 <header class="header">
24
25   <a href="home.html" class="logo"> <i class="fas fa-store"></i> shopie </a>
26
27   <form action="" class="search-form">
28     <input type="search" id="search-box" placeholder="search here...">
29     <label for="search-box" class="fas fa-search"></label>
30   </form>
31
32   <div class="icons">
```

```
41
42 <!-- header section ends -->
43
44 <!-- side-bar section starts -->
45
46 <div class="side-bar">
47
48   <div id="close-side-bar" class="fas fa-times"></div>
49
50   <div class="user">
51     
52     <h3>Kanishka Malik</h3>
53     <a href="#">log out</a>
54   </div>
55
56   <nav class="navbar">
57     <a href="home.html"> <i class="fas fa-angle-right"></i> home </a>
58     <a href="about.html"> <i class="fas fa-angle-right"></i> about </a>
59     <a href="products.html"> <i class="fas fa-angle-right"></i> products </a>
60     <a href="contact.html"> <i class="fas fa-angle-right"></i> contact </a>
61     <a href="login.html"> <i class="fas fa-angle-right"></i> login </a>
62     <a href="register.html"> <i class="fas fa-angle-right"></i> register </a>
63     <a href="cart.html"> <i class="fas fa-angle-right"></i> cart </a>
64   </nav>
65
66 </div>
67
68 <!-- side-bar section ends -->
69
70 <!-- shopping cart section starts -->
71
72 <section class="shopping-cart">
73
```

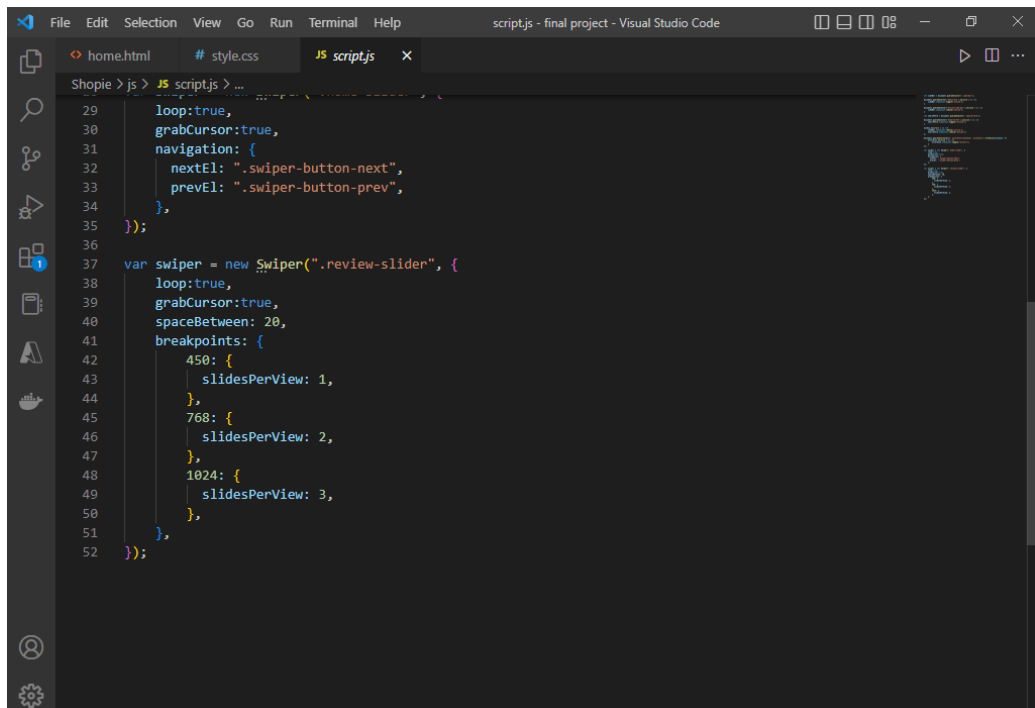
```
184 <!-- footer section starts -->
185
186 <section class="quick-links">
187
188   <a href="home.html" class="logo"> <i class="fas fa-store"></i> shopie </a>
189
190   <div class="links">
191     <a href="home.html"> home </a>
192     <a href="about.html"> about </a>
193     <a href="products.html"> products </a>
194     <a href="contact.html"> contact </a>
195     <a href="login.html"> login </a>
196     <a href="register.html"> register </a>
197     <a href="cart.html"> cart </a>
198   </div>
199
200   <div class="share">
201     <a href="#" class="fab fa-facebook-f"></a>
202     <a href="#" class="fab fa-twitter"></a>
203     <a href="#" class="fab fa-instagram"></a>
204     <a href="#" class="fab fa-linkedin"></a>
205   </div>
206
207 </section>
208
209 <section class="credit">
210
211   <p> created by <span>Kanishka Malik</span> | all rights reserved! </p>
212
213   
214
215 </section>
216
```

JAVA SCRIPT CODE



The screenshot shows the Visual Studio Code editor with the file 'scriptjs.js' open. The code is written in JavaScript and includes the following logic:

```
1 let sideBar = document.querySelector('.side-bar');
2
3 document.querySelector("#menu-btn").onclick = () =>{
4   sideBar.classList.toggle('active');
5 }
6
7 document.querySelector("#close-side-bar").onclick = () =>{
8   sideBar.classList.remove('active');
9 }
10
11 let searchForm = document.querySelector('.search-form');
12
13 document.querySelector("#search-btn").onclick = () =>{
14   searchForm.classList.toggle('active');
15 }
16
17 window.onscroll = () =>{
18   sideBar.classList.remove('active');
19   searchForm.classList.remove('active');
20 };
21
22 document.querySelectorAll('.accordion-container .accordion').forEach(accordion =>{
23   accordion.onclick = () =>{
24     accordion.classList.toggle('active');
25   }
26 });
27
28 var swiper = new Swiper(".home-slider", {
29   loop:true,
30   grabCursor:true,
31   navigation: {
32     nextEl: ".swiper-button-next",
33     prevEl: ".swiper-button-prev"
34   },
35 });
```



The screenshot continues the JavaScript code from the previous block, showing the initialization of a Swiper instance for a review slider:

```
36
37 var swiper = new Swiper(".review-slider", {
38   loop:true,
39   grabCursor:true,
40   spaceBetween: 20,
41   breakpoints: {
42     450: {
43       slidesPerView: 1,
44     },
45     768: {
46       slidesPerView: 2,
47     },
48     1024: {
49       slidesPerView: 3,
50     },
51   },
52 });
```


6.Future Scope

Today with the rise of digitalization it and development are playing an exemplary role in developing the economy in a very completely digitized format. To attain that the website designing plays an amazingly important role. Websites and web applications are the best way to easily access the desired progress and to produce such access the organizations are increasing their business online by developing the internet application to have interaction with the customer to realize the business progress.

As our use of technology grows and more businesses go online, web development has become a necessity for organizations large and small. Web developers are building interactive websites so businesses can reach new customers at national and international levels. Each new concept in e-commerce creates further need for web developers. So, web development jobs are constantly available—and they offer attractive salary packages.

Web development is a great career choice as it offers unrivalled flexibility. Anyone can learn how to code online, and as long as you have a laptop and decent internet connection, you can work from anywhere. The industry also presents unlimited freelancing opportunities. Another great reason to choose a career in web development is that you'll never get bored—web development is all about creativity and fun.

CONCLUSION

The final website can be accessed using the link -

<file:///E:/final%20project/Shopie/home.html> which is easy -

to use and can be viewed by anyone with the following link.

REFERENCES

1. <https://www.freecodecamp.org>
2. www.w3schools.com
3. www.tutorialspoint.com
4. www.getbootstrap.com
5. www.javascript.com

APPENDIX - A

- **World Wide Web:** World Wide Web commonly known as **the Web**, is an information system where documents and other web resources are identified by Uniform Resource Locators (URLs, such as <https://example.com/>), which may be interlinked by hypertext, and are accessible over the Internet..
- **HTML:** Hyper Text Markup Language use in making web pages.
- **RAM :** Random Access Memory is a form of computer memory that can be read and changed in any order.
- **CSS:** Cascading style sheet use to add colors in website and makes it more responsive and interactive
- **API :** Application Performance Interface is open source database use to fetch data.
- **Antivirus:** Computer Program used to prevent remove malware.